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CHINA'S ECONOMIC DILEMMAS IN THE 1990s: THE PROBLEMS OF REFORMS, MODERNIZATION, AND INTERDEPENDENCE

VOLUME 1

STUDY PAPERS

SUBMITTED TO THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

APRIL 1991

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LETTER OF TRANSMITTAL

APRIL 17, 1991

To the Members of the Joint Economic Committee:

I am hereby transmitting for use by the Joint Economic Committee, Congress, and the public a study assessing the economy of the People's Republic of China entitled, China's Economic Dilemmas in the 1990s: The Problems of Reforms, Modernization, and Interdependence. The study is in two volumes and comprises papers prepared at the committee's request by a large number of government and private experts.

China has made significant gains in the period since economic reforms were introduced more than a decade ago. But in recent years it has experienced serious problems which many experts believe have slowed and perhaps halted the momentum towards liberalization of the economy. The leadership understands that change is necessary to achieve modernization, but fears the instability that might accompany further change. The papers in these volumes examine recent economic performance and policies, and the underlying debate over the basic direction that China should follow.

The study was planned and directed by John P. Hardt, Associate Director of the Congressional Research Service of the Library of Congress, and Richard F Kaufman, General Counsel of the Joint Economic Committee. Leo A. Orleans acted as publications coordinator, assisted by Phillip Kaiser. We are grateful to the Congressional Research Service for making Dr. Hardt and others available to work on the project, and to the many authors who contributed papers.

The views contained in the volumes are those of the authors and not necessarily those of the Joint Economic Committee or its individual members.

Sincerely,

PAUL S. SARBANES,
Chairman.

LETTER OF SUBMITTAL

THE LIBRARY OF CONGRESS,
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Washington, DC, April 12, 1991.

Hon. PAUL S. SARBANES
Chairman, Joint Economic Committee
Congress of the United States
Washington, DC.

DEAR MR. CHAIRMAN: I am pleased to be able to transmit to you a collection of papers on the economy of the People's Republic of China entitled, "China's Economic Dilemmas in the 1990s: The Problems of Reforms, Modernization, and Interdependence."

The study was directed by John P. Hardt, Associate Director of the Congressional Research Service and Richard F Kaufman, General Counsel of the Joint Economic Committee. Leo A. Orleans served as the coordinator of the publication, assisted by Phillip Kaiser. Many CRS and other Library of Congress personnel, as well as government and private specialists, contributed significantly to the project.

We trust that the analyses and information contained in this study will be of value to the Joint Economic Committee, as well as the Congress in general and the broad audience of students of China.

Sincerely,

JOSEPH E. ROSS,
Director.

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CHINESE MODEL FOR CHANGE: PROSPECTS AND PROBLEMS

By John P. Hardt and Richard F Kaufman *

In his vision for China, Deng Xioping understood that in order to modernize, the country would have to open up to the outside world, and introduce market forces into the economy. The decollectivization of agriculture was followed by a variety of reforms to adjust the Stalinist system of central controls, but the impressive economic performance over the past decade was accomplished without democratization and without rejecting socialism.

Current models of democratization and transition toward a market economy in Central and Eastern Europe and elsewhere raise many questions about China. How applicable is the experience of the East European countries to the People's Republic of China? Will Western corporations, which favor a competitive market, be deterred from investing in a politically stagnant and economically indecisive China? What are the prospects for further reforms? Is China likely to follow in the footsteps of South Korea's Pak Chung-hi, who built that country's "economic miracle" by combining authoritarian control with some market reforms? Although these are difficult questions to answer at this time, many of the chapters in these two volumes provide a basis for considering the various options open to China. There is general agreement, however, that any major changes in the present system will have to wait for the passing of Deng and his octogenarian colleagues.

Continuity and caution are the hallmarks of the 8th Five-Year Plan (1991–95) and the 10-year development program for the 1990s. Official discussion of the plan in January 1991 was cautious in emphasizing a need for greater efficiency but suggesting that for now Chinese party leaders are rejecting any radical changes in their economic system. No mention was made, for example, of any steps which would resolve the problems associated with government subsidies to the large and inefficient state enterprises, to the transportation system, and to the privileged urban population, which pays a fraction of the market value for both food and housing. Instead, the new plan seems to focus on reducing uncertainties and only fine-tuning some of the existing policies with regard to prices, finance, taxation, banking, planning, investment, labor and wages.

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* John P. Hardt is Associate Director, Congressional Research Service, Library of Congress. Richard F Kaufman is General Counsel, Joint Economic Committee, U.S. Congress.

BLUEPRINT FOR THE FUTURE: CONTINUITY AND CAUTION

Continuity of the political framework for the economy was taken as a given. However, unable to force uniformity throughout the country, the weakened central government is no longer micromanaging output levels and materials allocations in all areas, and is searching for policies that would reduce the huge regional differences that now exist between the Special Economic Zones, the large municipalities, and some of the coastal provinces, on the one hand, and the less developed heartland of China on the other hand. Since 1988 there has been a partial reversal of the more liberal economic policies of the mid-1980s. This trend was reinforced after the Tiananmen incident in 1989, strengthening the hands of China's reactionary faction which had opposed many of Deng's market-oriented reforms.

The experiences of other socialist countries which have attempted to reform their economies suggest that a comprehensive approach is necessary. Eastern European countries which have reformed their political systems by making them more democratic have also made the most progress in reforming their economic systems and show the most promise for the future. These efforts contrast sharply with the failed gradual, partial and ambiguous reform efforts of the past. A recent report by several of the largest multilateral financial and economic institutions urges that the Soviet Union implement a comprehensive program of systemic reforms involving the legal, financial, and trade systems, and other vital sectors of the economy.

How relevant are these verdicts to China? Could and should China combine development of political pluralism with a rapid fundamental transition to the market? As might be noted in these volumes and the broader literature, there is no agreement among the China analysts outside or inside the PRC. Some believe that political reforms must go hand-in-hand with, or even precede, economic reforms; others agree with the Chinese leadership and maintain that given China's level of development and her traditional cultural orientation, economic successes over the past decade required social order and could only have been achieved under strong central authority. However, even those who agree with the past necessity of the unique Deng model would question its continued relevance and potential for improving performance.

PERFORMANCE

China's economic performance in the 1980s was a success by most measures. In this decade of reform, the economy expanded at an annual average rate of about 10 percent, living standards and consumption more than doubled, and for most of the period inflation was kept under control. By the end of the decade, China's foreign trade had more than tripled and the PRC had become an important player on the global economic stage. In 1989 China was the world's 13th largest exporter and total trade was equivalent to about one-fourth of its gross national product.

But in the late 1980s, it began experiencing serious problems. Rapid industrial growth intensified shortages of energy and raw materials, and led to transportation bottlenecks. An austerity program was implemented in 1988 to cool the overheated economy and to control inflation which had been accelerating since 1985. Restrictive policies, including sharp cutbacks of credit and added price controls, were effective in dampening inflation. In the process, reforms were put on hold and in some cases reversed; economic growth slowed to about one-third the average for the earlier part of the decade, and unemployment increased. While sustained hyperinflation was avoided, the underlying causes of inflation remain: weakness of the banking system and a tendency in normal times toward excessive growth of credit, protection of inefficient state enterprises, and the distortions caused by the price system.

Beijing extended the austerity program to the foreign sector. To rein in the growth of trade, trading authority was recentralized and a larger share of exports and imports were subjected to controls. The Tiananmen crisis resulted in reduced resource flows from abroad, accelerating the deterioration in the current account balance and the rise in debt service requirements that were already underway. For example, tourism declined sharply, foreign investors postponed projects, and there was a drop in commercial lending. However, these repercussions may prove to be temporary.

UNDERLYING DILEMMAS IN DENG'S MODERNIZATION FORMULA FOR THE FUTURE

As China enters a new economic planning period, the leadership appears indecisive about its critical economic dilemmas. There is a tug-of-war within the political hierarchy over the basic direction China should pursue; and there are differing opinions at this time among the top economic advisers as to the most promising steps that should be taken in order to improve economic performance and raise living standards. Chinese leaders seem to understand that some more basic economic reforms are a prerequisite to modernization, but want to make sure that such reforms are not accompanied by inflation, inequality, corruption, and disorder. The leadership knows, for example, how important it is to continue price reforms, but seems unsure as to when, how, or how quickly to introduce price revisions and the idea of decontrolling prices has been postponed indefinitely. It knows that the door to the outside world must be kept open, but it also fears creeping foreign intervention and subversion of traditional values by the westernization of Chinese society. The leadership understands the need for substantial change, but also requires political, social, and economic stability and fears change will bring about instability. The difficulty foreign observers have in predicting the direction China is likely to take during the coming decade is simply a reflection of the indecisiveness the Chinese themselves are experiencing as they try to balance forces for change and continuity.

The successes of Deng's modernization from 1978 to date notwithstanding, and no matter what mix of market and planned economy China chooses to adopt in the next decade, there are certain dilemmas and contradictions that will have to be faced and that will be more difficult to resolve than in the past. The fact that most of these problems are familiar and in no sense new does not in any way diminish the difficulties they raise. That is why even many of those who supported Deng's model in the past may have second thoughts about the future. Many Western experts would agree that Beijing will not be able to achieve both rapid economic expansion and price stability under the present economic system.

HUMAN FACTORS: MALTHUS REVISITED, WILL POPULATION EXCEED SUBSISTENCE?

China's population, now well over 1.1 billion, is increasing by almost 15 million every year. Because of increasing difficulties in imposing sanctions on couples exceeding the planned number of births, because a large proportion of the population currently is of prime reproductive age, and because of low mortality, the rate of population growth is not likely to decline during the 1990s. By the year 2000, China's total population is expected to be close to 1.3 billion.

China faces serious employment problems as it moves from a labor-intensive society to one that is more capital-intensive. This has been especially true in the most recent years, with some 20 million people being added to the labor force every year. Jobs were created during the boom years of the 1980s for the growing working age population, but economic retrenchment, which has reduced the labor absorption capacity of cities and rural industries, has caused unemployment and a large "floating population" of migrant workers. Also, China's aged population is expanding, and that will create an additional burden on the country's productive labor force to provide a safety net for the old and less employable.

While modernization will require an ever better educated labor force, China's per-capita expenditure on education has been decreasing. The illiteracy rate is still holding at over 20 percent. Even more distressing to the authorities is that the attendance rate of school-age children has been going down and the dropout rate has been rising.

MODERNIZATION OF AGRICULTURE

China has 22 percent of the world's population and only 7 percent of the world's farmland. For three decades, agricultural production has fluctuated widely due to natural disasters, faulty national policies, and local mismangaement, but in the period of reform, Chinese agriculture has demonstrated major achievements. By reducing the role of administrative controls and increasing the role of market forces during the 1980s, the gross value of agricultural prodcution nearly doubled, and productivity and farm incomes rose sharply.

Understandably, agriculture, which must annually produce more just to keep up with the population growth, continues to be listed as one of China's top national priorities. However, because of its much higher level of productivity, it is unrealistic to expect the agricultural sector to continue its rapid increase into the 1990s. Moreover, it will be facing some serious problems: (1) lacking adequate legal protection and unsure of their land tenure rights, peasants have felt insecure and unwilling to invest in their land, thus inhibiting development; (2) it is difficult to introduce modern technology and improve efficiency when peasants operate "stamp-size" plots—

a condition that is not likely to change soon; (3) too much money and labor have been diverted from agriculture to rural enterprises, which now account for over one-quarter of China's industrial production. Some Chinese officials propose consolidating farms and reassessing administrative controls, but the consensus abroad is that agricultural success can only come if China stays with market-oriented reforms.

INDUSTRIAL MODERNIZATION

Industry made significant progress in the 1980s, especially in areas where foreign investment and joint ventures have been encouraged, such as civil aviation. Industrial production has also increased greatly in township enterprises and collective factories. Nevertheless, serious problems remain and progress may be at a standstill unless more resources are allocated to infrastructure improvements and unless the path of market oriented reforms in manufacturing is resumed.

One obvious problem is that industrial reforms have not been extended to the large state-owned enterprises which are managed in about the same way they always have been under central planning. A growing proportion of these enterprises depend on government subsidies. Elsewhere in industry there has been a suspension of efforts at economic liberalization and deregulation. The trend since 1988 has been toward greater centralized control. In addition, limited budget resources and scarce hard currency hold back efforts to modernize the infrastructure.

There was a significant expansion and upgrading of equipment and facilities in transportation and telecommunications, but railroad and highway transportation have been unable to keep up with demand and telephone service is among the poorest in the world. These problems, together with shortfalls in energy production, may constrain the future expansion of industry and, in turn, the overall economy.

MODERNIZATION OF SCIENCE AND TECHNOLOGY

Science and technology continue to receive top priority from Chinese leaders who have long hoped that advances in this area would lead to accelerated economic and military modernization. China has many accomplishments in fields of technology including biotechnology, space, lasers, energy, and advanced materials. But a variety of bureaucratic, ideological, and cultural attitudes among conservatives and the old guard, and the rigidities of central planning, impedes progress especially with regards to innovation and commercial application. As a consequence, investments in science and technology have produced large numbers of scientists and engineers, but disappointing economic benefits.

The control of science and technology by the state has led to the bottling up of research results in ways that have deprived the civilian economy and the military from more productive sources of innovation. For now, the leadership understands that China must utilize foreign technology to avoid falling further behind the West. Its acquisition, however, has not been matched by an effective program of diffusion and assimilation.

MILITARY MODERNIZATION

Beijing reduced defense spending during the 1980s, along with the size of the Army. While some streamlining in military organization took place, weapons modernization, logistical support and combat capabilities fell and are not on a par with some of China's neighbors much less the West. But defense strategy and policy have recently changed, and for the first time in many years defense spending increased in real terms in 1990. Because of the tradeoffs between modernizing the defense sector and the rest of the economy, such a shift is bound to increase budget deficits, and make it more difficult to finance other activities.

OPENNESS AND MODERNIZATION

Foreign trade and investment from abroad made important contributions to China's modernization in the 1980s. Despite a halting start, China has greatly improved its commercial relations with the outside world. There is still interference by the bureaucracy, and there are still many concerns about legal restrictions imposed on traders and investors, but Beijing is making efforts to enhance the commercial climate and there are no signs that China's policy of modest opening to the world is likely to change. At this time, China's greatest worry regarding foreign economic relations may well be Western concerns about the uncertainty of post-Tiananmen policies, and the competition from Eastern Europe, the Soviet Union, and other areas for foreign investment, credits, and tourism.

Over the years there have been numerous heated arguments among both scholars and bureaucrats studying China not only about where China is going, but also where China has been. The most common assessment, and one that caused little past debate, is that China has been able to "muddle through." It is impossible to summarize the views of almost 60 scholars who have contributed to these volumes, and yet it is safe to say that they all would agree that despite China's innumerable problems, she may continue to "muddle through." In fact, the great majority of the contributors would be more optimistic than that. As long as the current leadership is in power, China will seek the impossible: a market-based system within a socialist planned economy in a one-party state. But before the decade is out the leadership will change and the desire for modernization, competition from her market-oriented neighbors, and pressures by a populace with new ambitions and expectations will force China to find a more efficient system. What precisely the new model will be no one can predict, but it is more than likely that the trend toward a market economy will continue, albeit with Chinese characteristics.

I. THE CONTEXT FOR ANALYZING CHINA

CHINA'S TRANSITION TO THE POST-DENG ERA

By Christopher M. Clarke *

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INTRODUCTION

China in mid-1990 stands at the edge of an uncertain future. Not since the death of Mao Zedong in 1976 have Chinese leaders faced such serious economic, social, and political challenges. China's economic problems in the 1990s will become increasingly complex, and their management will require the involvement and active support of new actors spawned by Deng Xiaoping's decade economic reform. These actors will demand greater participation in the political process—and fundamental reforms of the political system—as part of the cost of their support.

At the same time, the average Chinese expects more of the government—in terms of economic growth, employment, and consumer goods—than at any time in the past. Rising expectations already have led to increased pressure for change in the political system, a trend likely to continue, and even accelerate, in the 1990s. These rising expectations will place rather narrow limits on any leadership's ability to address such key economic issues as price reform and the state subsidy burden.

Rapid changes in the international environment in 1989 and 1990—most notably the loss of Western goodwill toward China as a

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result of the Tiananmen massacre of June 1989, as well as the rapid disintegration of the socialist world—also will complicate significantly Beijing's ability to respond to its challenges. For at least the next several years, China probably will face an outside world less willing to grant China special dispensation, whether in terms of foreign investment, favorable trade status, or human rights policies. Changes in the socialist world and in neighboring Asia will present special challenges for China.

Over the short to mid-term, the most likely leadership response to these pressures will be continued efforts to assure "stability" through coercion and central control. Neither party elders who regained influence as a result of quashing the pro-democracy protests of 1989 nor the younger leaders they promoted as successors show the willingness to take the steps needed to accommodate rising demands and pressures for change.

Notwithstanding Deng's frequent and impassioned statements espousing stability as the greatest desideratum, however, the political system Deng inherited and will pass along to the next generation institutionalizes instability at the top. Because the system has no rational and predictable procedures for leadership entry, exit, and popular evaluation, high-level politics will continue to revolve around jockeying for position by sniping at other leaders' ideas, performance, and proteges. The effect of continued high-level internecine struggle and ineffectiveness at dealing with China's problems will be continued erosion of public confidence and support, cynicism, alienation, and corruption.

The combination of falling public morale, rising popular pressures, and instability in the leadership virtually assures continued political conflict and uncertainty for at least the next several years. Periodic outbreaks of violence are a strong possibility.

Over the mid-term, it is difficult to predict exactly how the system will adapt to mounting pressure for change. Several extremes seem improbably, however: China does not seem likely in the foreseeable future to adopt a Western-style multi-party system of competition for power; it lacks most of the historical, cultural, and socio-economic conditions normally associated with such a transition. Nor is China likely to revert to the Maoist anarchy of the Cultural Revolution or disintegrate into local warlordism. China's octogenarian Long March veterans and their designated successors share with more reformist thinkers and politicians—and with most of the Chinese populace—a deep-seated fear of "luan" (chaos) that stems not only from the experience of the Cultural Revolution but from the past 100 years of Chinese history.

In the mid-term, however, China's central governing apparatus—whether more "reformist" or "hardline" in orientation—probably will be weaker and less capable of sustaining a coherent policy line than during the 1980s. Provincial and municipal officials will find the political vacuum. As a result, inequalities between and within areas are likely to worsen, leading to increased inter-regional conflict and social tension. Beijing's principal role may be to referee these disputes and broker deals between relatively autonomous localities rather than pursue a consistent national development strategy.

Over the long-term, old command-style solutions and intimidation cannot solve China's dilemmas or achieve the widely shared and time-honored goal of wealth and power. To succeed at these objectives, successors will need to bolster their legitimacy by accommodating at least some of the new economic, social, and political forces unleashed by a decade of "reform and opening to the outside." The resulting "Chinese-style" solution likely will be less coercive and more inclusive, but still basically authoritarian and centralized, at least in aspiration. At the grassroots, however,great diversity in implementation will remain, and the regime's aspirations will continue to fall short of its capabilities.

II. Increasing Demands of the System

During the coming decade, economic problems, social evolution, pressure for political reform, and the need to respond to a rapidly changing international environment will place new and intensified demands on China's political system. Exacerbating the difficulty of managing these problems will be increasing strains from population growth, which will add more than 15 million new mouths to feed each year.

A. ECONOMIC PRESSURES

That China will face serious economic problems in the 1990s is well known and will be discussed elsewhere in this volume. Energy and transport bottlenecks, outdated industrial plant and equipment, a poorly educated and ill-trained work force, and worsening environmental pollution are only a few of the more difficult economic problems with which the post-Deng leadership will have to wrestle.

Worrisome though they may be, however, China's economic problems are neither inherently intractable nor the most serious challenges the leadership will face. Indeed, for a number of reasons, China's economy in the 1990s could prove to be one of the brighter spots on an otherwise cloudy horizon. China is blessed with a relative abundance of most of the natural resources needed to modernize; it has a huge potential internal market, and a population that, properly motivated, is willing to work and anxious to get ahead. Furthermore, the Chinese economy still has ample room for improvements in efficiency that could sustain impressive growth rates through the decade.

Moreover, even in the economic sectors where China has the most serious problems, a combination of relatively wise policy, judicious application of money and other resources, and a little time could produce substantial benefits. Throughout the 1980s, for example, China sustained double-digit rates of industrial growth on single-digit growth in energy output and transport facilities. Such a pattern probably could continue if China made even moderate gains in eliminating remaining inefficiencies in the energy and transportation sectors and in energy-consuming industries, and achieved relatively modest increases in energy output and transport infrastructure. Similarly, significant improvements in environmental degradation could be accomplished with moderate investment. Factors that could significantly alleviate problems include adjustments of prices for raw materials, energy, and transportation; a continued shift of macro-economic priorities toward light and consumer goods industry and services; and changes in incentive patterns for workers, farmers, managers, and intellectuals.

Even under the relatively favorable conditions of the 1980s, however, China's leaders have been unable to sustain wise policies and judicious application of resources over a sufficient period of time to make breakthroughs in the worst economic bottlenecks. Deng and his colleagues elected to take on the easiest problems first by tackling agriculture; efforts since 1984 to shift attention to the more difficult problems of the urban economy have faltered. The immediate post-Deng leaders probably will be no more successful in addressing these problems than were their predecessors.

B. SOCIAL PRESSURES

More serious than the economic problems China's future leadership will face are the socio-economic and socio-political pressures that have developed during the reform decade. At least two sets of such problems are intractable—demanding management and defying solution—and will seriously exacerbate strains on China's political system in the 1990s.

Expanding population. Arguably, Mao Zedong's most damaging legacy was not the Cultural Revolution, the Great Leap Forward, the collectivization of agriculture, or even the adoption of communism. It was to ignore, and then silence, Ma Yinchu and other economists and demographers who warned in the 1950s that unrestrained population growth would bring disaster to China. The post-Deng leadership is now stuck with a problem not of its own making.

China's population at the end of 1989 surpassed 1.11 billion and is increasing at a rate of over 15 million each year. By the end of the century, the population will grow to around 1.3 billion, topping out at 1.6 to 1.88 billion by the middle of the next century. These projections, considered too low by some demographers, assume continuation of a fairly effective population control program.

China has to feed one-fifth of the world's population on 7 percent of its arable land. Urbanization, construction of housing, rural industrialization, road development, and the impact of sub-dividing land to family-based farming have cut deeply into cultivable land. Unlike energy resources, China has already reached the limit of its finite, and shrinking, available arable land.

It will take 50-70 years before China's population peaks and begins to decline. In the meantime, China will have to wrestle with the impact of both the size and age structure of the population on such issues as the population-to-farmland ratio, urbanization and the need for housing, environmental pollution, employment, education, and old-age insurance. Moreover, efforts to manage the problem—through population control programs and migration to less-populated parts of China—engender new socio-political tensions.

Rising expectations. A second intractable set of socio-political issues China will face inthe1990s stems from the very nature of Deng Xiaoping's reform program. Deng's shift in 1978 from "class struggle as the key link" to the "four modernizations" legitimized the displacement of idealism with self-interest, and substituted consumerism for deferred gratification. Belatedly, Deng and other leaders recognized that this left Chinese society drifting without a spiritual rudder. Their consequent, feeble attempts to revive Marxist orthodoxy and "educate the masses" about the need for "arduous struggle" and austerity through campaigns to "emulate Lei Feng" ring hollow and seem only to foster cynicism among most young people.

Moreover, by replacing ideology with economics as the touchstone of his program, Deng made *performance* the basis of regime legitimacy, and performance increasingly is measured by most Chinese almost exclusively in personal terms. After several generations of being told to defer self-gratification in the greater interest of unifying China, defeating the Japanese, overthrowing the "feudal" system represented by the Kuomintang, and establishing first socialism and then communism, most urban Chinese have decided that it is now their turn to benefit from China's decades of struggle. Widespread knowledge of the living standards of the rest of the world have reinforced Chinese demand for personal betterment and gratification. Chinese under 40 constitute a "me generation," and their self-interest is not likely to disappear during the coming decade.

Short of a national or international cataclysm, there is probably no way to put this genie of heightened expectations back into the bottle. The result is a population that is harder to lead, less forgiving of leadership mistakes, and less willing to accept slogans and ideological cant in place of performance. It may also be quicker to explode in anger.

C. POLITICAL PRESSURES

New players at home. Deng Xiaoping's reforms have resulted in a proliferation of economic interests that did not exist before 1978—or existed only in muted or latent form. These range from individual entrepreneurs to local industries, specialized agricultural households, migrant workers, and export-oriented firms. Such new forces have had a significant, although often obscure, impact on the leadership's decisions about economic policy, particularly on implementation.

New players abroad. In addition, China's growing integration with the outside world has brought into play a new set of foreign and international actors, including international financial institutions, foreign traders and investors, tourists, and bilateral trade associations. Each of these new actors has affected to some degree Chinese leaders' decisions about policy and personnel. For example, the World Bank and International Monetary Fund, along with foreign development assistance loans, have had a profound effect on Chinese development planning. The GATT accession process also has had a major influence on Chinese leaders' thinking about economic reform. And throughout the 1980s, awareness of the way China is perceived by foreign investors has influenced Chinese leaders' decisions not only about economic policy, but about the atmospherics and timing of high-level personnel changes. Foreign human rights groups and international criticism over such issues as population control methods have contributed to some adjustments of Chinese policy, notably a significant easing of Chinese family planning policy in the early 1980s. Finally, considerations about reunification with Hong Kong and Taiwan have shaped Chinese foreign and economic policy Deng created the Special Economic Zones in large part to show that "one country" could house at least "two systems" and have influenced such areas as minority relations and provincial affairs.

A new power elite. At the same time that new domestic and international influences have come into play, Deng's reforms have "pluralized" China's traditional power structure. In the 1980s, provincial and local governments received expanded authority and control over resources, which significantly altered the existing relations between center and locality. Central leaders were unsuccessful—despite strong and repeated efforts in 1989-90 in returning some of this authority to Beijing. In addition, the process of reform not only legitimized the individual pursuit of self-interest, but the pursuit of corporate and regional interests as well. Under the Maoist system, arguments for local interests had to be couched in terms of the national good or ideological purity. Under Deng, overt pursuit of advantage based on bureaucratic, provincial, local, corporate, or other affiliations has become both acceptable and expected.

Peripheral pressures. Internal reforms and examples from abroad have led to increasing ethnic assertiveness among the more than 80 million Chinese citizens who are not members of the Han majority. Tensions between Hans and Tibetans have created continuing difficulties for the Beijing government and have attracted negative international attention. Ethnic, and possibly religious, assertiveness can be expected to grow during the 1990s, not only in Tibet but in other areas on China's periphery, under the increasing pressure of such outside influences as Moslem fundamentalism and contact with fractious relatives across the Soviet border. Dramatic political change in Mongolia could also exacerbate tensions between Hans and Mongols in the PRC. Although such ethnic tensions probably will not come to threaten the central regime, they will demand careful and sensitive management to avoid serious or prolonged bloodshed, expense, and international recrimination.

These forces have led, and will continue to lead, to demands for greater participation in decisionmaking. During the mid-1980s, party chiefs Hu Yaobang and Zhao Ziyang—with at least the tacit approval of Deng—sought ways to incorporate new actors into the political process without ceding the principle of Community Party control. The dramatic and successful popular calls for political pluralization in Eastern Europe and the Soviet Union, along with China's own bloody suppression of the overt demand for wider political participation in June 1989 suggest that such pressures cannot be contained indefinitely.

D. INTERNATIONAL PRESSURES

China is also likely to face increasing demands from external forces in the 1990s. These will come from at least three directions, west, north, and east.

For at least the next several years, the West will be less friendly, forgiving, and forthcoming to China as a result of the Tiananmen Square crackdown. Throughout the 1980s, because China appeared to be headed in the "right" direction, it was accorded the benefit of the doubt on issues ranging from trade relations to human rights. In the Western public's eye, China forfeited the right to the benefit of the doubt on June 4, 1989, and is unlikely to regain its favored public position without undertaking major reforms. The West will be less willing to make exceptions on issues such as GATT accession, bilateral trade frictions, and human rights abuses. Moreover, if the world economy takes a downturn in the 1990s, as some economists predict, China's trade frictions with the West will worsen, hindering Beijing's plans to modernize its economy by means of foreign technology imports and a major export drive.

No matter what Gorbachev's fate, China will probably face a prolonged period of uncertainty along its northern border with the Soviet Union. Certain byproducts of glasnost—such as ethnic tensions—are probably irreversible and may have serious implications for Beijing. As Eastern Europe pulls farther and farther away from Communist Party rule and socialist economics—and as pressures mount for similar changes in the Soviet Union—China's leadership could face an increasingly strong political and ideological challenge and an increasingly attractive alternative for Western investors and lenders.

China could also face problems in the east from its Asian neighbors, possibly including mounting pressures in Japan for converting Japanese economic supremacy into political, and even military influence; a succession struggle in North Korea that could destabilize a 45-year status quo; increasingly strong independence sentiment on Taiwan; and a modernizing Southeast Asia presenting ever-stronger challenges to China as a trading rival and alternative location for foreign investment.

III. Decreasing System Capabilities

For at least three interrelated reasons, China's political system in the immediate post-Deng era will be less capable of dealing with the demands placed upon it than it has been during the 1980s, unless major changes are made.

A. THE NATURE OF AUTHORITY

Deng reforms shifted the basis of authority and legitimacy to successful economic performance, and the time frame within which leadership performance is measured has been shortened by the imperatives of power politics, the need to retain popular support to assure compliance with policies, technological developments such as the information revolution, and heightened public awareness in China of external developments. During the early 1980s, leaders could sustain a program for two to three years, making marginal adjustments and improvements, without losing public support or jeopardizing elite consensus. By the mid-1980s, the timeframe had telescoped to about a year, and by the late-1980s, Chinese leaders were increasingly impelled to assess performance on a quarterly or biannual basis. Elite and masses alike are demanding, "What have you done for me lately?" As a result, significant shifts in policy occur relatively rapidly, even as leaders try to reassure domestic and foreign audiences of policy continuity.

This process is likely to continue—even intensify—as leaders jockey for position in the succession by attempting to discredit one another. For at least several years, post-Deng leaders are likely to have a distressingly short time in which to produce results, shift policies and personnel, or be pushed aside. This does not suggest that the system will be capable of considered or sustained approaches to the mounting demands and problems it will face.

B. LEADERSHIP: INSTITUTIONALIZED INSTABILITY

In spite of his effort to replace Mao's "cult of personality" with rational/legal norms of bureaucratic behavior and consensual intra-elite politics, Deng has enjoyed the tremendous advantage of undergirding his performance-based authority with considerable personal prestige and charisma. His successors will enjoy no such advantage, because Deng failed in one of the central goals of his reform program: institutionalizing the succession process. None of Deng's candidates for the top party slot—Hu Yaobang, Zhao Ziyang, and Jiang Zemin—emerged from the rough and tumble of political competition. Each was plucked from relative obscurity and promoted at least as much because of personal ties as performance. Because Jiang, and for that matter, other leaders like Premier Li Peng, were selected through a process that differed little from Mao's selection of Hua, their prospects for political survival after their patrons are gone seem slim.

China's current political system and Deng's own ambivalence in confronting the tradeoffs between the long term benefits of yielding personal authority and the short term costs of doing so to his programs, personnel, and prestige—has militated against the promotion of younger leaders with vision and the development of their personal authority and charisma. Both Hu Yaobang and Zhao Ziyang fell, in part, because they began to assert their own ideas and programs in ways that threatened Deng's personal authority, and in part because they sought to push Deng's own program for political reform to its logical conclusions, which would have eclipsed Deng and other elders.

Neither Jiang Zemin nor Li Peng is likely to make the mistake of challenging Deng and the other elders. As a result, it probably will take several years for new leaders to emerge and develop programs and public support. During the post-Deng transition, China almost certainly will face continued, possibly worsening, problems with corruption, local despotism, fragmented bureaucratic and regional authority, and patron-client politics. Such a system will necessarily be more preoccupied with adjudicating minor problems and disputes than with addressing major demands.

IV. AN UNCERTAIN FUTURE

Chinese history since 1949 has been characterized by a major upheaval every five to ten years, including the Great Leap Forward (1958-60), the Cultural Revolution (1966-69), the Lin Biao affair (1971), and the fall of the Gang of Four (1976). In retrospect, the

1980s decade of relative stability, continuity, and prosperity stands out as the exception rather than the rule. As of mid-1990, social, economic, and political conditions in China suggest that the transition to the post-Deng era will not be smooth or easy.

It is impossible to predict with any degree of confidence exactly how events will unfold during this transition period. Too much remains unknown about the inner workings of the leadership and the public mood. Much depends on the order and timing with which a handful of still-influential party elders leave the scene. But the 1989 crackdown on pro-democracy demonstrators and the continuing repression of dissent virtually assure that whichever leaders emerge in the immediate post-Deng period will labor under the handicap of a serious lack of legitimacy and public support at a time when economic, social, political, and international pressures on the regime are mounting.

A. SHORT-TERM: ELDERS TAKING TURNS

As long as Deng Xiaoping is alive and able to function, he will almost certainly remain *primus inter pares*, the final arbiter of leadership disputes, architect of leadership consensus and coalitions, and broker of deals. But in recent years, Deng has shown signs of frail health, and he suffered a severe political setback as a result of the Tiananmen crisis and his loss of two hand-picked successors within a period of two years. These events eroded his power and strengthened that of other remaining elders. When Deng dies, one or more of these elders almost certainly will succeed to his position as the power "behind the screen."

The most likely candidate to succeed Deng in the short term is President and Central Military Commission Vice Chairman Yang Shangkun. Despite his seniority and influence, especially in the military, however, Yang lacks Deng's breadth of experience and network of personal ties. Even more than Deng, Yang will have to share power with such other octogenarians as Chen Yun, Li Xiannian, Peng Zhen, Bo Yibo, and Wang Zhen. To an extent, he will also be dependent on younger leaders to carry out his bidding. But until the passing of the entire generation of veteran "proletarian revolutionaries," younger leaders probably will defer to their elders while jockeying for position and seeking to eliminate rivals.

Over the short term, the leaders and their designated successors are likely to continue to respond to the challenges they face not with offers of conciliation and accommodation or new and imaginative solutions, but with the same tired, outdated slogans and programs they have trumpeted since June 1989. Economically, this means strengthened central planning,a visceral aversion to inflation,and an inclination toward egalitarianism. Politically, they will prescribe rigid adherence to party rule under the "four cardinal principles," with heavy emphasis on the instruments of the "dictatorship of the proletariat": control, coercion and repression. In foreign policy, they combine a grudging and resentful recognition of China's technological backwardness and need for commerce with the West with a prickly nationalism.

The one issue on which almost all top Chinese officials—elders or successors—seem most united is the need for stability. Current leaders drew profound lessons from the fate of fellow communist officials from East Germany to Mongolia who sought to accommodate and manage public pressure for reform of their unpopular regimes. Their conclusion was that such efforts are the first step down a slippery slope into oblivion. Perversely, however, the Chinese leadership's very efforts to assure stability in the short-term through coercion and reversion to failed policies of the past will only strengthen the pressures for change over the mid- to long term.

B. MID-TERM: A RANGE OF POSSIBILITIES

How these pressures will play out over the longer term is even more hazardous to predict than the likely courser of events over the short term. It seems virtually certain, however, that public alienation and antipathy toward the regime will increase under the current repression and economic stagnation. If, as seems likely, intense leadership infighting follows the passing of the elders and continues for a prolonged period with no decisive outcome, dissatisfied and alienated citizens will be quick to take advantage of leadership disarray to press their demands. Under such revolutionary conditions, angry citizens with diverse aims could rally around a common cause of overthrowing the regime.

Democratization. Such a coalition, however, would probably be temporary and fragile, and unlikely to result in a relatively rapid or stable transition to democratic politics. Aside from the communist party, China has no semi-autonomous loci of potential political loyalty, such as the Catholic Church in Poland. Even its intellectual dissident community is highly fragmented and disorganized and lacks coherent, well-considered goals or programs for how to replace the current political system.

Moreover, support for adoption of Western-style parliamentary forms of government is probably neither broad nor deep in China. Chinese political culture lacks a tradition of free competition and coalition-building among equal and independent political groups. Indeed, few Chinese appear to desire the "chaos" of political competition or to believe that China is ready for "one man, one vote." Rather, a "democratic" solution to China's crisis of legitimacy would likely be an almost exclusively urban phenomenon characterized by the existence of numerous groups articulating a wide range of particularistic demands and programs with little penchant for cooperation. Advocates of systemic change in China will be watching closely developments in Eastern Europe and the USSR; if experiments with peaceful transition to democracy succeed there, pro-democracy activists in China will be emboldened and armed with a model to emulate.

Descent into chaos. A situation in which a weak and divided leadership confronts an angry and divided public would be inherently dangerous and unpredictable, especially if competing leaders resorted to the kind of demagogic appeals to mass hysteria and particularistic interests that characterized the Cultural Revolution. Such a situation could lead to a breakdown of social order, at least in many urban areas of China, with considerable violence and bloodshed. The most likely fault lines would pit beneficiaries of reform and most intellectuals against China's growing lumpen proletariat and disadvantaged groups. In some areas, social conflict could also take on ethnic overtones.

Such outbreaks of localized, even intense, violence and unrest are possible in the atmosphere of crisis that could follow the death of Deng Xiaoping or Yang Shangkun. But several factors militate against such a situation persisting or becoming widespread. Most Chinese harbor a deep aversion to "luan" (chaos); many remember the frightening days of the Cultural Revolution and the social, economic, and personal costs it exacted. Although many supported the goals of the 1989 prodemocracy movement such as curbing corruption and nepotism and opposing inflation, many also disapproved of its tactics of street politics. Perhaps an equally compelling argument against the descent into chaos is the strong desire of most Chinese to improve their material well-being. Most probably agree with the current leadership that such improvements can take place only under conditions of relative stability. If chaos threatened, public support for reassertion of order, even by force, would be widespread.

Continued "dictatorship of the proletariat." Political paralysis and succession infighting in Beijing, especially if accompanied by an imminent disintegration of social order, might allow at least a temporary consolidation in power of a post-elder regime dominated by younger hardliners. An entrenchment for several years of leaders committed to economic central planning, political coercion, and social intimidation could result in a Brezhnev-style stagnation. To be sure, such an approach cannot address China's basic problems, but it probably could suppress pressures for change temporarily, albeit at a high cost.

If maintained over a longer term, such a program could doom to failure China's plans for modernization and achieving the status of a world power as the rest of the world continues to outpace China's economic modernization efforts. Moreover, indefinite suppression of pressures for peaceful reform of the existing system is likely to result in increased restiveness, declining worker productivity, and acts of sabotage and terrorism, transforming disaffection into demands to overthrow the system.

The ability of younger hardliners to consolidate control would depend in large part of the extent and depth of divisions within the security apparatus. Rifts in the coercive apparatus were central to the high-level politics surrounding Mao's death and the removal of the Gang of Four, and are likely to be so in the aftermath of Deng's death as well. In this context, there have been clear signs that China's security forces were seriously divided by the Tiananmen crackdown and that hardliners were uncertain of their loyalty.

Resentful military. Many professional military officers deeply resented being drawn once again into civilian politics after almost a decade of efforts to recover from the politicization of the People's Liberation Army during the Cultural Revolution. They probably resent efforts to elevate the propagandists and commissars of the General Political Department to preeminent status in the military, the implicit doubts about their loyalty implied by leadership statements on the need to retain absolute party control over the military, the incessant political browbeating and campaigns to "emulate Lei Feng" since June 1989, and the reorientation of training from military tasks to political education.

Since the crackdown, there have been indications that the civilian security apparatus—comprised of the People's Armed Police and ministries of public security and state security—may be similarly divided and that hardliners suspect its loyalty. Many local police reportedly opposed the use of force to end prodemocracy activity in 1989, recognizing that they must continue to live in close proximity with the protesters and remembering the "reversal of verdicts" that followed the 1976 Tiananmen incident after Zhou Enlai's death. Since June 1989, there have been rumors of continuing poor morale and opposition among rank-and-file police and intelligence cadres. The replacement in March 1990 of the entire top leadership of the PAP and persistent rumors of further impending leadership shakeups suggest leadership concern about the loyalty of the security apparatus.

Despite divisions and reservations, military and security officials probably would not sit on the sidelines if social order began to disintegrate. Although the human cost might be high, China retains sufficient coercive force to reestablish order, and is somewhat better prepared to do so professionally than it was in 1989. However, if some elements of the leadership were to try to stage a coup against rivals, or to order the use of force against civilian protesters in a way that some security officials perceived as illegitimate, existing divisions within the security apparatus could result in armed clashes and street violence such as occurred in Romania in December 1989.

Rising regionalism. Over the longer term, the net effect of the succession struggle probably will be a significant weakening of central authority regardless of whether hardliners or moderates prevail. Beijing's ability to intervene and enforce its will on local authorities—for good or ill—will be diminished.

As a result, local party and government leaders will move to fill the political vacuum and assert local interests and autonomy on such issues as social order, economic development strategy, and budgetary control. Such a trend had already become apparent during the latter half of the 1980s, well before the Tiananmen incident. Having devolved authority and control over resources to the localities in the late 1970s and early 1980s, Beijing was unable to reassert effective control over the economy despite increasing signals through the mid-1980s that to do so was in the urgent national interest.

One result of a situation in which the center is unable to articulate or enforce a consistent national development policy or compel inter-regional cooperation has been increasingly wide variability among provinces and regions in China. Those areas most favored in terms of natural resources, trained manpower, technological level, and access to the outside world—that is, much of coastal China and a few sections of the interior—have been pulling ahead of their less favored counterparts at an accelerating rate. This, in turn, has exacerbated strains between regions—and within regions—resulting in sometimes sharp conflicts over resources, mounting trade wars and inter-provincial protectionism, and increased social conflict.

Beijing to a large extent has been reduced to playing broker between regions, a role that even hardliners in Beijing seem to have recognized by the spring of 1990. From late 1989 to early 1990, the central government appears to have cut a deal under which such revenue-producing areas as Guangdong and Shanghai would be guaranteed a continued large measure of autonomy in economic and even social policy, in exchange for a greater financial contribution to the center. Beijing, in turn, will redistribute the increased revenues as subsidies to urban consumers and loss-producing state enterprises, and to national priority projects. Such a program, in effect, recognizes "two Chinas": a more rapidly growing coastal region, increasingly tied into the international economy and responsive to market forces, and a largely centrally planned and heavy industry oriented "socialist" economy located mainly in the interior.

Such a trend toward increased regional authority would not resemble traditional "warlordism" in the sense of regional-based military dictatorships like those that existed in China in the 1920s. The center would not be likely to lose control of such key issue areas as foreign and defense policy, nor would greater regional autonomy be based on military strength. A severe and prolonged weakening of central authority could, however, result in stepped-up efforts by disaffected minorities in such peripheral areas as Tibet and Xinjiang to pull away from China. A weak center in an uneasy truce with powerful localities would seriously exacerbate the difficulty of absorbing Hong Kong and undermine, if not kill, efforts toward reunification with Taiwan.

C. LONG-TERM: BUILDING A NEW SOCIAL COMPACT

Over the longer term, mounting economic problems and socio-political pressures are likely to force future Chinese leaders to accommodate demands for greater pluralism and wider political participation by groups spawned or strengthened by reforms, including individual entrepreneurs, intellectuals, scientists and technicians, local officials, and urban workers. Indeed, such a trend was already underway before the Tiananmen incident and the ouster of party chief Zhao Ziyang. Zhao and his reformist associates, for example, sought to incorporate specialists into the decision-making process, strengthen the role and independence of trade unions, and make elections more competitive and reflective of the popular will.

Prescriptions for political reform before the Beijing massacre generally had a strong elitist, authoritarian, and centralist flavor. Commentators in 1987–88, for example, debated extensively the lessons of the four "little dragons" and the benefits of "neo-authoritarianism," pointing to the economic successes of Taiwan, South Korea, Hong Kong and Singapore under systems which combined "benevolent" authoritarian political rule with capitalist economics. Such regimes, according to Chinese analysts, incorporated the newly emerging middle classes into the political process without ceding real political authority.

Apparently motivated by hopes to bolster Zhao Ziyang's political position—and their own influence—against both hardline conservatives and meddling elders (including Deng), advocates of neo-authoritarianism argued that China needed to follow the same path, thereby assuring more, not less, central authority to enable Beijing to make the changes needed to modernize the economy and pave the way for eventual democracy.

Constructing a stable new "social compact" after the leadership's breach of faith in June 1989, however, probably will be a difficult and protracted process of accommodation between the need for central authority, the pressures for local autonomy, and public demands for institutional checks and balances against arbitrary abuse of power by individuals or institutions. Reformers within the system may hope to resume a process of top-down political reform in which political supremacy is retained by China's educated elite and many aspects of central political control are strengthened, while control over the economy is loosened.

Others will demand more than a return to the mid-1980s program of Zhao and Hu Yaobang, however, They will argue that legitimation of the marketplace of ideas and broadening of political participation must be accompanied by a restructuring of political relationships, including at least limited competition for power. Opposition groups will face a strenuous up-hill struggle to present a real challenge to political control by the communist party, at least at the national level, and are unlikely to do so for the foreseeable future. China has little experience in the sorts of cooperation and coalition building among free and equal political groups needed to build a viable opposition.

THE DYNAMICS OF INTERNAL POLICIES

By Kenneth Lieberthal *

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SUMMARY

China, like many third world states, confronts enormous demographic, environmental, economic, and social challenges. Given the magnitude of these challenges, instability would threaten any government in Beijing during the 1990s.

Major current weaknesses stem from four basic sources. First, problematic legacies from the imperial past, especially from the late Qing period (1644–1911), continue to affect the system. Five late Qing failures and their legacies are of particular contemporary importance: failure to develop a concept of federalism that could lend legal and regulatory stability to central-provincial relations; failure to develop an effective system for the central government to collect taxes; failure to establish a stable role for the military in the polity; failure to protect political institutions against personal factional struggles; and failure, in the face of foreign pressure, to achieve a consensus regarding either core values or the types of relations China should have with the outside world.

The second basic source of contemporary system weakness is China's adoption of a Leninist type system. leninist political systems have several key flaws: they are "top-down" polities that too easily lose touch with domestic realities; they suffer from poor flows of information; they have systemic problems with political succession; and they have acute economic difficulties and problems in coping with the social consequences of development once they have passed an early "extensive" economic growth stage. China suffers from all these difficulties.

Third, China's reforms since the late 1970s produced enormous successes but, especially since 1985, they have also generated sys-

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temic problems of considerable magnitude. These problems include inflation, corruption, malaise over values, fragmentation of domestic markets, bureaucratic opposition, and expectations that have risen more rapidly than performance.

Finally, the democracy movement of 1989 made Chinese citizens aware of the breadth and depth of the government's unpopularity. The crisis played out in a way that further undermined the prospects for a smooth post-Deng political succession.

Despite the above vulnerabilities and problems, it is still possible that the Chinese polity can avoid serious disruption during the coming years. Part of the explanation for this is cultural: Chinese tend to fear both disruption and the power of a seemingly united top leadership. If the succession can be managed in a fashion that prevents open divisions at the top, therefore, social order may be maintained.

In addition, the political system may have entered a moderately stable period of a standoff between central and local authorities, where the locales de facto have considerable flexibility and the Center retains enough resources to be an active player in the system. Indeed, for all its weaknesses, the Chinese political system retains considerable capacity to act vis-a-vis the society.

In view of the above considerations, China's political future during the 1990s is quite uncertain. Several possibilities are realistic, although as of 1990 no single one of them is highly probable. These include: s structural stalemate between Beijing and the more entrepreneurial provinces and cities; a coup by reformers, followed by a resurgence of the reform agenda; a military coup (or military "king making") during a protracted political stalemate over the succession; a mass political upheaval sparked by elite disunity in the wake of Deng's death; or a fundamental collapse of central authority, reminiscent of the 1911 "revolution" that brought down the Qing. These possibilities are not completely mutually exclusive—e.g., a mass political upheaval could lead to a coup of one sort or another. As these various scenarios highlight, however, the Chinese political system as of 1990 shows every sign of being less capable of coping flexibly and creatively with its demographic, environmental, economic, and social problems than it was only a half decade ago.

I. CHALLENGES OF THE 1990s

The Chinese face a number of formidable challenges in the next decade. Population growth, for example, adds one new mouth to feed roughly every two seconds. Environmental insults such as air pollution, contamination of water resources, and decertification are reaching critical and constraining dimensions. And fundamental processes such as urbanization and the revolution in telecommunications are changing the attitudes and escalating the demands of the country's citizens. Given the magnitude of these challenges, instability would threaten any government in Beijing during the 1990s.

The present Chinese system is very powerful compared with those of most other third world polities. Nevertheless, a combination of factors discussed in this essay has produced weaknesses that are so great that it is appropriate to talk in terms of a "systemic crisis." Analysis of sources of vulnerability rather than of sources of stability, therefore, take up the major part of the following analysis.

II. SYSTEMIC PROBLEMS

If the Chinese political system experiences either major upheaval or fundamental collapse over the coming few years, the reasons for the vulnerability of the system will not be heard to pinpoint. The structural weaknesses of the People's Republic of China (PRC) stem from four sources, which are outlined in this section.

A. LEGACIES FROM THE QING

In it last decades the Qing dynasty (1644–1911) suffered from various systemic maladies, five of which continue to plague the current Chinese government. Some of these problems have deep roots in earlier history, but all were especially prominent during the final years of the imperial system.

First, China's leaders remained wedded to the notion of a unitary state, and they thus failed to do serious work on laws and regulations that might provide this huge country with a federal system that would provide a needed combination of decentralization and stability. China was then and is now too large to govern uniformly and effectively from the capital. But instead of conscious efforts to create a federal system, the actual roles of provinces and other units have been determined by their economic strength, military power, and the political skills of their leaders. The assumption that China should be a unitary (as versus federal) state is an important and deleterious legacy of the imperial past that still robs the country of needed flexibility.

Second, the Qing dynasty in its later years lacked an effective system of central taxation. It depended for revenues on a foreign-administered customs apparatus and on a domestic tax farming system. The PRC as of 1990 still does not directly collect central taxes from individuals and units. Instead it farms out tax collection to the country's 30 provinces and autonomous regions and negotiates revenue agreements with each of them.

Third, the late Qing suffered from a blurring of civil-military relations. The armies that were called into being to suppress the huge mid-nineteenth century rebellions created systemic uncertainties about civil-military relations that in some ways continue to have salience. The Chinese army of 1990 is under the leadership of the ruling political party—not the national government, and the boundaries of the military's role in both elite politics and national governance remain unclear and potentially very changeable.

Fourth, in the late Qing personal politics and factionalism overwhelmed the institutional discipline of the vaunted Chinese civil service. There had always been tensions between court politics and the formal civil service, but toward the end of the dynasty (as in the final stages of previous dynasties) institutional considerations were determined by personal power. The problem of personal power and lack of institutional constraints remains severe in the PRC. While this had its origins in the Qing system, the dynamics of the Leninist political system adopted in 1949 have exacerbated the issue, as explained below.

Finally, foreign pressures in the late Qing contributed to a breakdown in the consensus in China over the country's core values and over the types of relations it should have with the external world. The ripple effects of the subsequent debates extended to disagreement about the roles of Chinese who had been exposed to foreign values, the basis of unity that the government should seek, the type of foreign policy to pursue, and other equally fundamental issues. One of the startling aspects of the political discourse in China during 1988–1990 is that it included in fairly prominent fashion virtually every basic perspective that was being hotly contested at the end of the Qing. No national closure on these fundamental issues has been reached.

B. FLAWS IN LENINIST SYSTEMS

Following a decade of reforms and opening to the outside world, it is easy to forget that the Chinese Communist system still retains the core structural features of a Leninist system. There is an ample literature that details the general capabilities of and flaws in Leninist-type systems, and China's experience fits well within the scope of this general analysis. Overall, strengths of Leninist-type systems include their ability to control the information available to the population, their enormous coercive capability, their mobilizational style that can produce rapid economic development, their ability to extract high levels of savings from the population for state directed use (typically, in concentrated development of heavy industry and related defense expenditures), and their relatively effective control over income distribution. All these characterized the Chinese system until the beginning of the reform decade.

Leninist systems, though, also have key weaknesses, and these have been central to the experience of the PRC since 1949. The major weaknesses are as follows.

These systems are almost wholly "top-down" polities. Each official's career depends on the favor of higher level officials, and thus for every official there is an overriding need to look "up" rather than "down" in considering decisions to make and actions to take. There is thus startling potential in this type of system to ignore the realities of the real world of actual events in favor of responding to the wishes of higher level officials who control one's fate.

This tendency to look "up" is only one of a number of elements that combine to produce seriously flawed information flows in this type of system. In broad terms, the strongly propagandistic nature of these systems encourages development of a generally low information regime. In addition, bureaucrats generally fear producing data and insights that might incur the wrath of a key, powerful leader, and most bureaucracies hoard information as a core resource in itself. The results include lack of coordination among different bureaucratic actors and inadequate consideration of policy externalities during the decision making process. The fact that final policy decisions are thus often flawed by poor data is itself masked by the very secretiveness of the system.

Leninist systems are also notorious for the difficulty of effecting a smooth political succession at the top. Essentially, the coercive, mobilizational nature of the system tends to lead to the development of personalized, charismatic leadership at the apex, with few institutional restraints on the power of the key leader. The general desire to mobilize the population also produces a tendency to avoid constraining the political leadership by a legal system that stands above politics. The result of these various tendencies is personalized rule that is not highly institutionalized. Few top rulers in the history of world communism, moreover, have voluntarily stepped down from power.

The problems for political succession posed by this situation are well known to all students of autocratic political systems of both the Left and the Right. While top leaders may recognize the importance of assuring a smooth succession, they in the final analysis make it impossible for such a succession to occur. Time and again they groom potential successors, only to decide eventually that the heir apparent has become too anxious to take over before the right time has come. As a result, few heirs apparent survive politically long enough to inherit power. Those that do outlive their patrons, moreover, often fail nevertheless to secure the succession because the subservient behavior required to survive while the patron was alive typically tarnishes the heir apparent once the patron is no longer there to provide protection. Succession thus tends to be a time of political upheaval, sharp policy swings, and great uncertainty in Leninist systems.

Finally, Leninist systems have proven effective in producing rapid growth in the early stages of industrial development, but they have been shown to be systematically weak in sustaining that growth and coping with its socio-political consequences. The "extensive" growth characteristic of the early stages of industrial development is well suited to the concentrated power and mobilizational skills of the Leninist polity. But even this type of growth requires technical expertise and increasingly high levels of mass education. As the population becomes more knowledgeable and the economy becomes more complex, there is a need for greater openness with regard to information and for more effective means of dealing with an emerging intelligentsia. But Leninist systems have shown themselves generally incapable of the flexibility required to maintain the loyalty of the intelligentsia and of the emerging middle class.

China has fully exhibited the above rigidities and pathologies. Information distortions have plagued the Chinese leadership from the beginning. At their most extreme, they produced tragically inaccurate understanding of the real conditions of the country with regard to food supplies in the latter years of the Great Leap Forward, with the result that tens of millions of Chinese starved to death. Succession politics have also been core to the experience of the PRC. Arguably, much of the political turmoil at the top in China from 1958 through 1979 revolved around succession dynamics and, as detailed below, from around 1986 to the present political succession has again been a driving (and destabilizing) force in Chinese politics.

Finally, the Chinese reform effort begun in the late 1970s came in part because urban China could no longer develop according to the closed, mobilizational forms that were core to the traditional Leninist (Maoist) system. China needed the contributions of her intellectuals, but relations between the political authorities and the intelligentsia had been sundered by Maoist radicalism. More broadly, intensive economic development required greater exposure to the international arena and freer flows of information within China than could be accommodated in the traditional Leninist framework. The Chinese leaders realized at the end of the decade of the 1970s that the economy as a whole was experiencing a long-term rise in capital-output ratios that boded ill for future development. Recognition of this problem provided major impetus for the reforms that characterized the ensuing decade.

Overall, then, important weaknesses in the polity of the PRC arose from its Leninist structure and operational character. The reforms of the 1980s were directed, in part, at resolving some of these issues. However, the fundamental Leninist structure of the Chinese polity remained in place. While the reforms produced some major improvements, in the final analysis they also created additional structural flaws that exacerbated some of the problems of the underlying system.

C. EFFECTS OF THE REFORMS

By the late 1970s Deng Xiaoping, among others, recognized some of the above weaknesses in the Chinese political system and initiated a major effort to address them and ameliorate their consequences. While the ensuing changes did not proceed according to a detailed, long-term plan, from an early point reformers tried to push the system in four broad directions: toward greater institutionalization and less vulnerability to destabilization because of problems with political succession; toward less detailed management of the economy by the government; toward greater availability of information to both the government and the populace; and toward more personal freedom to enjoy the material rewards from one's labors.

Deng adopted a wide array of measures to increase the chances of a smooth political succession. He personally eschewed holding the top post in either the party or the government so that he could put his successors (Hu Yaobang and Zhao Ziyang) in place and give them time to build up sufficient prestige to hold their own.[1] He also tried to clarify the allocation of authority at the apex of the system and to regularize the procedures by which the top organs functioned. He therefore abolished the post of Chairman of the Chinese Communist Party (CCP) in 1982. This position had provided Mao with a position *above* the party apparatus, and Deng sought instead to have the party led by a General Secretary, as are virtually all other ruling communist parties.[2]

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[1] Deng did, however, retain direct control of the military through his position as head of the Military Commission of the Communist Party. He finally relinquished this post only in 1990.

[2] The General Secretary heads the party apparatus. Under Mao, the CCP had *both* a General Secretary (Deng himself most of the time) *and* a Chairman (Mao) until the General Secretary position was abolished during the Cultural Revolution.

Deng also encouraged his elderly colleagues to retire from politics, and he created transitional bodies—most notably the Central Advisory Commission—to provide a graceful exit from power for these individuals. In addition, Deng encouraged a regularization of the decision making process, including holding meetings of top government and party bodies on a fairly regular schedule. In these ways and others, Deng launched a multifaceted effort to overcome the Leninist system's structural weakness regarding political succession.

Unfortunately, Deng did not go far enough, and the limitations he placed on his reforms in this area eventually undermined the effectiveness of the important measures he took. Most fundamentally, Deng never developed sufficient confidence in his chosen successors to remove himself completely from power. Rather, he retained his informal position as the "core leader" in the system, thus effectively robbing Hu Yaobang and Zhao Ziyang of independent decision making authority. This put both younger men in an untenable position, and as a result as of 1990 there is no clear successor to this 85-year-old leader.[3]

Deng and his reformist colleagues adopted an impressive array of measures to reduce government micromanagement of the economy. In the rural areas, they reinstated a family farming system, with families being given control over land (on a contract basis) and obtaining considerable discretion over crops to plant. Rural families also gained the right to shift some members out of agricultural production altogether. Externally, the regime opened the country to the international economy. Beijing encouraged foreign investment and adopted numerous laws and regulations to make such investment attractive to foreign firms. China also greatly increased its foreign trade, which grew at a faster rate than did GNP throughout the reform decade. The PRC elected to become a member of the World Bank, the Asian Development Bank, and the International Monetary Fund—all as part of the effort to increase the country's integration into the world economy.

Within China's urban economy, Beijing sought to decentralize control over economic decision making and to enhance the role of market forces in structuring economic outcomes. To promote this effort, in the 1980s China formally adopted a multiple price system for key urban commodities. This system stipulated that goods produced "on the plan" would sell at fixed "plan" prices, while all additional production of the same items would sell at higher, market-influenced prices. The basic idea was to wean the economy off the plan gradually, while avoiding the ruinous inflation that a one-step abandonment of "plan" prices would have produced. The administrative decentralization sought to tap the enthusiasm of local entrepreneurs in order to enliven the economy through material incentives and the energy that competition generates.

These various economic measures promoted rapid economic growth, with impressive increases in the standard of living. But they also created problems that by 1988–89 had become politically very damaging. The family farming system in the countryside produced extremely high rates of growth in grain output through 1984, as the increased incentives and more rational crop distribution worked their magic. The flaw in this approach, though, was that peasants did not feel they had secured ownership of their land, and they thus proved very reluctant to invest in basic land improvement. The state, for its part, also cut back on agricultural investment, throwing this burden onto the peasantry. The net result was land deterioration, inadequate infrastructure investment, and disappointing yields, especially in grains. Indeed, the 1984 grain harvest remained China's largest during the 1980s, even though the population grew by nearly 70 million people during the remainder of the decade.

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[3] Hu was removed as General Secretary in January 1987, and Zhao fell as a consequence of the student movement and its suppression in June 1989.

The urban economic reforms also produced many unanticipated and unwanted outcomes. Basically, the decentralization placed economic decision-making power more at the level of large municipalities than in the hands of enterprise directors. These large municipalities tended to adopt a proprietary approach to the firms in "their" economy. Municipal governments thus became increasingly protectionist, establishing trade barriers to shield their own firms from "outside" competition. They also assumed great importance in allocating vital credit, and they used this to promote overly rapid expansion of local industrial facilities (the tax base of the municipality consists primarily of local industry). As a result, Beijing lost much of its ability to control the allocation of credit and the levels of production, but local governmental interference in the operations of the market remained extremely high.

Under this system the gap between living standards in the richer coastal areas and those in the interior grew rapidly. These regional differentials in turn sparked growing resentment from the interior provinces and raised the prospect of increasing pressures for migration from poor interior areas to the richer coastal cities. China by early 1989 estimated that illegal "floating" residents of major cities already totaled more than 50 million people.

The dual price approach produced a situation in which identical items (such as tons of steel could sell for prices that differed by more than 200 percent. Many officials developed ways to acquire items at "plan" prices, sell them at "market" prices, and then use a part of the phenomenal profit to make payoffs to cover up their deeds. Corruption spread rapidly under these conditions, and by the late 1980s reached such an extent that it produced very widespread popular resentment.

Local market protectionism and official corruption also affected foreign investment. Essentially, it became extremely difficult either to realize economies of scale in industrial production or to hold down transaction costs in an environment in which corruption and particularism affected almost all transactions. As a consequence, foreign investment in manufacturing industries remained low, and the typical foreign invested manufacturing enterprise had capital income of only about $1 million. By the late 1980s, foreign firms increasingly turned to Southeast Asia and other areas for industrial investment, at considerable opportunity cost to China.

The reformers sought to improve economic decision making by, inter alia, greatly enhancing the volume and reliability of the information available in the system. At the top of the system, Zhao

Ziyang established policy think tanks that developed extensive information-gathering and processing capabilities. In the scramble to attract foreign investment, moreover, numerous provinces and municipalities began to publish extensive statistics on their local situations, thus vastly enhancing the available information on the Chinese economy.

The above and many related efforts were basically helpful for the system. Greater information provided at least an enhanced possibility for better informed decision making. But the information explosion went beyond economic data for specialists, and in this larger sphere the results proved less uniformly beneficial.

China's leaders decided at the end of the 1970s to increase fundamentally the information available to the country's citizens and officials by making the mass media more diverse and informative. As part of this policy, Beijing multiplied the availability of television to the populace throughout the country. But exposure to the outside world via television produced a revolution of rising expectations. Over time, the gap between economic performance and rising expectations regarding standards of living contributed to a diminution in the authority of the communist leadership. The telecommunications revolution linked up with China's greater openness to the outside world, moreover, to make clear that the Communist party had previously misled the populace when it had declared that China was a model to which other countries looked. Rather, China now stood out clearly as a nation that was comparatively poor and that, moreover, had seen the gap between it and its East Asian neighbors widen considerably since the communist revolution in 1949.

Finally, enhancement of personal freedom to enjoy the fruits of one's labors, like the other measures discussed above, initially produced a surge of support for the leaders but eventually created serious problems. Indeed, this shift away from the values of egalitarianism, ideological commitment, and asceticism that had been promoted during the Maoist era produced considerable malaise in China of the 1980s. One part of this change was generational—there are very marked differences in personal preferences and attitudes toward national issues that differentiate those Chinese raised during different periods: the reform era, the Cultural Revolution decade, the Great Leap Forward, the early 1950s, and various periods in pre-1949 society. In short, Chinese society to a striking degree lacks an integrated value system, and generational cleavages are exceptionally sharp.

In addition, the tremendous stress on making money as an honorable personal goal under the reforms produced pervasive jealousies, as many people felt (often mistakenly) that they were being shortchanged in comparison with other groups. The one thing on which all groups could agree was that they resented the special privileges of the relatives of high officials, who could use their connections to engage in both legitimate and corrupt transactions and to live a good life.

In bureaucratic terms, moreover, the reforms considerably weakened the authority of the national bureaucracies that were in charge of propaganda (with the decline in ideology, these bureaucracies became unclear as to what values they should propagate, and the population's vastly expanded exposure to heterodox ideas put the propaganda apparatus on the defensive), civilian coercion (as material incentives partially replaced brute force in guiding people's behavior and the reforms in their early phases entailed bringing back into authority individuals who had been held by the police organs), and personnel assignments (as discipline broke down through "back door" arrangements and as new priorities encouraged appointments based on skill levels rather than political attitudes). At least initially, bureaucracies in charge of managing the economy experienced a bureaucratic resurgence, but subsequent decentralization measures threatened the positions and clout of many of these, too.

The major bureaucratic winners in the reforms were, therefore, territorial governing bodies, especially those of the large municipalities and some provinces. This mounted to a significant shift in the distribution of power and created numerous disgruntled officeholders. These in turn formed a potential reservoir of support for leaders who might seek to roll back part of the reforms.

The reforms thus brought profound changes. A number of these, such as reducing the regime's ability to use propaganda and coercion to mobilize the population around regime-held goals, weakened the Leninist political system. The reforms produced not only impressive economic growth but also rapidly rising dissatisfaction over increasing regional inequalities, a growing gap between rising expectations and actual economic rewards, and rising concerns about corruption and inflation. Furthermore, while the reforms moved China a significant step away from the centralized control over the economy characteristic of Leninist systems, they left the economy far short of the type of market-driven system envisioned by many reform advocates. The Chinese system continued to be one in which the government dominates the economy, but "the government" by 1988–89 in reality referred largely to major municipalities and provinces, each acting to a significant extent in its own immediate interests. In addition, the reforms undermined any consensus on values to hold the society together. They also produced a large number of bureaucratic losers among Chinese officialdom.

Perhaps most fundamentally, the development of private and collective economic sectors, the reversion to family farming, and the opening to the international economy, among other reform efforts, began to create the basis for a more self-conscious citizenry. Citizens who were better off financially and more knowledgeable about political and economic matters beyond their immediate environment grew in number around the country, especially in the cities. These citizens began to search for ways to gain effective input into the political and economic matters beyond their immediate environment grew in number around the country, especially in the cities. These citizens began to search for ways to gain effective input into the political system that governed them, and they experienced tremendous frustration in their inability to gain legitimate, institutionalized access to this system.

The reforms overall changed and strengthened the Chinese system until around 1984–1985, but since 1986 the problems have mounted more rapidly than the improvements. Popular dissatisfaction reached very high levels by the winter of 1988–1989, to the extent that the top political leaders lost all support among large portions of the urban populace and among many lower level officials during this time. Although aware of the difficulties, these leaders proved unable to agree on appropriate remedies and instead projected a beleaguered image domestically. With rising expectations, a decline in shared values, bitter resentments and jealousies, and a national sense of drift, the Chinese system by early 1989 had entered a crisis. The students who took to the streets to demonstrate in the wake of Hu Yaobang's death on 15 April 1989 sparked nationwide support [4] precisely because the general levels of frustration and dissatisfaction had already grown so great over the issues raised above.

D. SUPPRESSION AND DEEPENING CRISIS

The popular movement in the spring of 1989 and its brutal suppression in Beijing in early June dealt additional blows to the political system. The crisis itself breached the normal boundaries that make it almost impossible for Chinese citizens to know the political views of large numbers of other citizens. At the height of the crisis, numerous groups took to the streets with banners proclaiming their unit identifications and their major grievances/demands. In addition, for a short period the Chinese media gave the movement full and sympathetic coverage, thereby rapidly spreading the news that many millions of citizens (including many Communist party members) shared a sense of profound dissatisfaction with the Chinese polity. This knowledge, once known, cannot be erased by the suppression that began in June, 1989.

Substantively, the crisis greatly exacerbated underlying divisions in the leadership, and in the final analysis it led to the purge of Zhao Ziyang, thus completing the undoing of Deng Xiaoping's initial succession scheme. But the damage at an elite level extended beyond particular personnel changes, even though these were very important.

During the course of the crisis, Deng Xiaoping, Yang Shangkun, and the octogenarian leaders who formally had retired form politics made all the key decisions. Even people who formally held the highest level party, government, and military positions essentially served during this period only as staff to these older individuals. This pattern of decision making made clear that the numerous efforts during the 1980s to invest power in offices and procedures rather than in individuals had failed. When core decisions had to be made, those who had retired dictated to those who purportedly held the most powerful official posts in the land. In the aftermath of this situation, the Chinese political system at its apex lacks the ability to legitimize political power by virtue of appointment to office via formal procedures. There are now thus no specific procedures that can legitimize the transfer of power to a particular successor in a way that will impart some stability to the succession by marking its clear end point.

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[4] The foreign news media concentrated their coverage of the popular movement in April-June 1989 on events in Beijing. In reality, though, huge demonstrations occurred in scores of cities across the length and breadth of the country. The challenge to the basic political system posed by the popular movement was thus far greater than most Americans realized at the time.

Given the fact that octogenarians now play a crucial role in governing China at the apex, moreover, the issue of succession is constantly on the agenda. Also, because the elderly patrons have significant policy disagreements among themselves and each has his followers among the contenders for the succession, the political system as of 1990 is experiencing a kind of inherent uncertainty and instability that cannot be expunged until he succession has fully worked itself out, which will probably take years.

The 1989 crisis left in its wake, therefore, a deeply wounded polity. Political divisions are fundamental at the very highest levels, while the system is dominated by octogenarians, and formal procedures for allocating power have been shown to be without merit. Large portions of the population not only are deeply frustrated but also for the first time realize that their disillusionment is widely shared. The measures adopted by a greatly frightened top leadership to reassert control and build authority—measures that include launching propaganda campaigns built around blatantly untrue assertions, arresting dissidents, reducing contacts with the outside world, and recentralizing domestic decision making—are, moreover, both very unlikely to reduce popular dissatisfaction and very likely to reduce the reliable information available to the leadership on the real situation in the country. The Chinese polity is, in sum, in systemic crisis, with widespread disagreement on values, rules, and priorities and a striking loss of legitimacy even among many officials themselves.

III. Countervailing Forces for Stability

Political systems can remain in a state of crisis for long periods without experiencing an explosion. Despite the above vulnerabilities and problems, it is still possible that the Chinese polity can avoid serious disruption during the coming years. The stresses in China as of 1990 are very severe, but there are also strong forces that provide some basis for future stability. Four in particular warrant mention.

First, many Chinese citizens and high officials believe that the Chinese urban populations is cowed by an appearance of unity among the leading officials. The top people need not actually agree on major issues. Rather, they must present a relatively united front to populace as a whole. Chinese leaders themselves believe that when they are visibly split over key issues, the country rapidly degenerates into chaos. Popular shows of disaffection can, of course, erupt even in the face of elite unity, but the leaders believe these can be contained by normal political and coercive measures. A major falling out among the elite, though, would be seen by elites and masses alike as an opportunity for political action to spill over into the streets and spread very quickly.

The popular movement and its suppression in 1989 probably strengthened the belief of all concerned in the validity of this relationship between social order and the appearance of elite unity. The movement gained tremendous momentum as disagreements among the leaders stymied their ability to adopt effective measures to contain it. Once the elite closed ranks (by purging Zhao Ziyang and some of his followers), the winners took forceful action to seize back control over Beijing, and disorders elsewhere around the country rather quickly quieted down once the elite had demonstrated its unity (and thus its resolve and ruthlessness) in the capital.

This would suggest that if the political succession can be handled at the top in a way that maintains the appearance of basic unity among the leaders, this succession might unfold without provoking popular unrest. A key moment in this development is likely to come in the wade of Deng Xiaoping's demise. His passing from the scene will greatly heighten tensions, and some small scale acts of public protest will probably occur. A critical test will come with the ability of the top leaders to respond to these acts in a way that conveys their agreement on how to handle matters. Signs of serious disagreement at this stage could provoke major instability or the collapse of all central authority.

Second, there is a palpable fear of disorder in China and a strong belief that chaos lurks just below the surface order at all times. This widely held concept by Chinese (one that allows very little "room" between extraordinary order and extraordinary chaos) provides a basis for supporting social order even in the face of severe disillusionment with the political system. It also, however, means that, once social order begins to break down, the disorder can cascade through the society with exceptional speed. Chinese leaders, well aware of the fine line between chaos and order, will loose few opportunities to remind the population of the potentially enormous social costs of breading ranks and fostering disorder. This same mind set makes it unlikely that even losers in the succession struggle will attempt to mobilize popular action to bolster their position.

Third, the Chinese political system may have entered a moderately stable period of a standoff between central and local authorities. Corruption in the system is so pervasive (one leading Chinese economist estimated in 1990 that rent-seeking behavior by officials involved some 300 billion yuan per year) that it is hard to see what means Beijing can use effectively to discipline provincial and municipal apparatuses. While some individual leaders in various localities may run great risks if they defy the center, ingrained localism became a structurally integral part of the system during the 1980s and will be extremely difficult to root out. At the same time, Beijing retains sufficient resources and authority—especially over the military—to remain a powerful force in the country. In this situation, the Center may for a prolonged period call for greater centralization, especially of budget authority, and the provinces may effectively resist recentralization and pursue quite diverse economic strategies. While fully satisfying nobody, this type of situation could conceivably last for a period of years so long as the other requisites for avoiding social instability mentioned above continue to be met.

Finally, despite its numerous weaknesses, the national political apparatus itself remains extremely powerful. This is an apparatus with tremendous experience in interfering massively in the levels of the populace, and it has exceptional capabilities in terms of cynical political manipulation and ruthless suppression of dissent. No laws or values effectively constrain the political authorities from preserving their dominance, and China's citizens are acutely aware of this fact. The very ruthlessness of the political system in the past [5] and the sheer size of the career party and security networks are elements of strength in calculations of the current system's ability to weather its crisis. This calculation would, of course, change if the security forces were to turn against the civilian leadership.

IV. Conclusions

This essay has argued that the PRC inherited some systemic maladies from China's late imperial period, that the Leninist-type system the country initially adopted in the 1950s contained structural weaknesses that have plagued the Chinese polity, that the reforms of the 1980s, despite major successes, contributed additional problems for the political system, and that the dynamics and denouement of the popular movement in 1989 further exacerbated what must be considered to be a profound, systemic crisis in the PRC. At the same time, the decentralization measures of the 1980s have left in their wake considerable "give" in actual policy development and implementation, and it is possible that the underlying crisis will not produce either a political explosion or a complete collapse of authority if the critical succession issue can be managed in a fashion that preserves at least a facade of basic elite unity. Such a facade does not mean the substantive policies cannot change, perhaps dramatically. It suggests, rather, that any major changes are handled in a fashion that keeps the populace convinced that the leaders can band together to contain fundamental challenges to the system.

Although China's political future is uncertain, this paper presented some of the more realistic possibilities which are not necessarily mutually exclusive. There are, in addition, very disturbing changes that will continue to occur under almost any of the scenarios discussed. Specifically, China will face increasing migratory pressures as people from the interior try to share the bounty of the richer coastal regions, and this could produce deeply unsettling demographic changes. In addition, China confronts environmental pressures that are becoming acute and that will produce escalating social and economic strains. The very process of urbanization (regardless of population shifts toward the eastern parts of the country) will also generate tremendous social tensions, as such changes have produced in all other countries.

China during the 1990s, in sum, will confront domestic political pressures on its political system of fundamental magnitude. The party and government will likely be hampered in managing these issues by structural weaknesses and by power struggles that absorb the attention of the elite. In addition, China's leader during the 1990s will be called upon to more than simply maintain themselves in power and preserve surface social order. They should also meet the enormous challenges the country will face in substantive areas like demographic pressures, environmental demand, and urbanization. As of 1990, the Chinese leadership and political system show every sign of being less capable of coping flexibly and creatively with its problems than they were only a half decade ago.

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[5] Past ruthlessness is, of course, two-edged. It increases both popular disillusionment and the perceived cost of open expression of that disillusionment.

POWER STRUCTURE AND KEY POLITICAL PLAYERS IN CHINA

By Chi Wang *

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I. INTRODUCTION

It is a difficult task to present a full and up-to-date picture of key leadership in China, since there are so many events, personages, unexpected changes of political developments and policies involved. However, it is hoped that from the following analysis, one can obtain a better understanding of the subject through an outline of essential facts and information.

II. EARLY COMMUNIST HISTORY AND LEADERS

The Chinese Communist Party (CCP) was officially founded in July 1921 at the First National Congress in Shanghai by 12 Chinese and two representatives of the Comintern (Communist International) in Moscow. The founding members, including Mao Zedong and other young students, elected Chen Duxiu as chairman, in absentia. From 1921 to 1927, the CCP cooperated with the Kuo Min Tang (KMT), led by Chiang Kai-shek. With the Shanghai Coup of April 12, 1927 Chiang attempted to wipe out the Communists. Mao Zedong and Zhu De engaged in guerrilla tactics, supporting various strategies between 1928 and 1934, but finding themselves encircled by Chiang Kai-shek in October of that year, the Communists began the "Long March", which culminated at Yan'an in Shaanxi Province, where in 1935, the CCP Politburo accepted Mao as leader. From that time until his death in 1976, Mao was the CCP's dominant figure.

By 1945, the CCP reported a membership of 1.2 million, with another 900,000 in the military. On October 1, 1949, the People's Republic of China was established, with Mao as chairman of both the

CCP and PRC. In 1958, he proposed the Great Leap Forward as an attempt to achieve Communism, but this disrupted the economy and caused 20 million people to die of starvation. In 1959, Mao stepped down in favor of Liu Shaoqi as Chairman of the PRC, who, however, was toppled after Mao launched the Cultural Revolution in 1966. Rising leader Deng Xiaoping and the popular Zhou Enlai managed to ride out the storm of criticism of the ensuing decade. When Mao died in 1976, the Cultural Revolution was brought to a halt. Hua Guofeng became head of the CCP, with Deng Xiaoping returning to power in 1977 as deputy premier, and becoming the dominant figure in both the CCP and PRC, which he has remained ever since.

III. THE PRC'S POWER STRUCTURE TODAY

The current power structure in the PRC is based on the constitution approved by the 12th CCP National Party Congress held in September 1982. The central leading organs are:

- *Central Committee.* Elected by the National Party Congress. When the National Congress is not in session, the Central Committee carries out its decisions, directs the entire work of the Party, and represents the Party in its external relations.
- *Political Bureau (Politburo)* and its *Standing Committee.* Elected by the Central Committee in plenary session. When the Central Committee is not in session, these entities exercise its functions and powers.
- *Secretariat of the Central Committee.* Elected by the Central Committee in plenary session; attends to the day-to-day work of the Central Committee under the direction of the Political Bureau and its Standing Committee.
- *General Secretary.* A member of the Standing Committee of the Political Bureau; elected by the Central Committee in plenary session. Responsible for convening the meetings of the Political Bureau and its Standing Committee and presides over the work of the Secretariat.
- *Central Military Commission.* Selected by the Central Committee.
- *Central Advisory Commission.* A new organ first elected at the 12th National Party Congress as a means of replacing aged leaders with younger people. Acts as political assistant and consultant to the Central Committee and works under the leadership of the Central Committee. Members of the Commission must have Party standing of 40 years or more, have rendered considerable service to the Party, have fairly rich leadership experience and enjoy high prestige inside and outside the Party.
- *Central Commission for Discipline Inspection.* Also a new entity established by the 12th National Party Congress. Elected by the National Party Congress; functions under the leadership of the Central Committee. Main tasks are to uphold the Constitution and other important rules and regulations of the Party and check up on the implementation of the Party's line, principles, policies and decisions.

This theoretical division of authority is quite different in practice, however. For example, according to the CCP constitution, the Central Committee is the highest authority between party congresses. The Politburo and its Standing Committee are elected by the Central Committee to carry out day-to-day work in its name. In actuality, however, convening plenary sessions of the Central Committee has been difficult because of the compromise necessary between the different factions so that its responsibility and power has existed only in name. In fact, the Standing Committee commands the Politburo; and the Politburo commands the Central Committee. In 1956, the Secretariat was established to handle the general management of the party, leaving the Politburo to concentrate on key policy questions. By 1985, the power of the Politburo had diminished, and the Secretariat assumed much of its decision-making power. However, in October 1987, the 13th Party Congress addressed the problem of institutionalization of power at the apex, and restored power to the Politburo, downgrading that of the Secretariat.

The government administrative arm of the party is the State Council, headed by the premier. When the power of the Politburo had temporarily eroded, the state council's power greatly expanded, especially in the management of economic affairs and particularly under Zhao Ziyang (1987–1989). Originally, after 1956, the Politburo for the most part exercised administered control through three channels (the Secretariat for party management); the State Council (for government administration and policy implementation); and the Central Military Commission (for the People's Liberation Army). Before the 13th Party Congress in 1987, the leadership consensus, with the Politburo at the core, split apart as each of the three powerful institutional hierarchies went its own way, resulting in a lack of institutional procedures for the regulation and coordination of the political power held by the general secretary, the premier, and the army. The 13th Party Congress tried to address the problem by restoring decision-making power to the Politburo, composed largely of first line leaders, and downgrading the Secretariat, but this still does not seem to have solved the problem.

In theory, the Central Military Commission (CMC) is responsible to the Central Committee and the Politburo in the conduct of military affairs; after 1985, however, PLA representation on the Politburo was reduced to an all-time low, and military work increasingly came under the CMC (with Deng Xiaoping as chairman). As to the Central Advisory Commission (CAC), under the 1982 constitution, its members had power to oversee the work of the Secretariat, but after the 13th Party Congress, the members of the CAC could no longer give orders to the Politburo, but only advise.

The experience of the past decades thus clearly reveals that the institutions of both party and government authority in China are neither stable nor static vis-a-vis one another and are repeatedly brought into new relationships by external directive rather than by structural balancing mechanisms.

IV. LEADERSHIP BY SENIORITY

The CCP has long accepted the concept of leadership by seniority, sometimes also known as leadership by "lines", which has influenced all efforts to devise procedures for an orderly leadership succession. The top leadership group is divided into the "first line" leaders, of average age between 50 to 70, who manage the day-to-day work of the party, including some policy formulation; and the "second line" leaders, average age from 70 to 80, who are involved only in major issues of strategy and policy. In 1962, for example, when all three were in their late 50s and 60s, Liu Shaoqi presided over the Politburo, and Deng Xiaoping headed the Secretariat, to form the "first line"; while Mao Zedong, retreated to the "second line". In 1980, Deng retired from the "first line" by relinquishing his post as first vice premier, and other posts including chairmanship of the CMC; while Hu Yaobang and Zhao Ziyang, and later Zhao Ziyang and Li Peng, formed the "first line" to develop their own bases of support. By August 1989, the "first line" and "second line" leaders were as shown in the following chart:

TABLE 1. Leadership Lineup of the CCP Politburo as of August 1990

First Line Leaders

Name	Age	Key Posts
Yang Shangkun	83	President, PRC and vice chairman of Central Military Commission (CMC)
Wan Li	74	Chairman, National People's Congress
Qin Jiwei	75	Minister of Defense
Jiang Zemin	64	General secretary, CCP; chairman, Central Military Commission
Li Peng	63	Premier; member, CCP Politburo
Qiao Shi	66	Member, Standing Committee, CCP Politburo
Yao Yilin	73	Member, Standing Committee, CCP Politburo; vice premier
Li Ruihuan	56	Member, Standing Committee, CCP Politburo
Song Ping	73	Member, Standing Committee, CCP Politburo
Ding Guangen	62	Member, CCP Secretariat
Tian Jiyun	61	Vice premier
Wu Xueqian	69	Vice premier
Li Tieying	54	State counselor; member,CCP Politburo
Li Ximing	67	Party secretary, Beijing Municipal Government, member, CCP Politburo
Yang Rudai	54	Member, CCP Politburo Sichuan Provincial Party secretary

Second-Line Leaders

Name	Age	Key Posts
Deng Xiaoping	86	Chairman, Central Advisory Commission
Chen Yun	85	First secretary, Central Advisory Commission
Li Xiannian	85	President of the People's Consultative Conference
Peng Zhen	87	
Deng Yingchao	85	
Nie Rongzhen	90	Marshal, PLA
Wang Zhen	81	Vice President, PRC
Fang Yi	83	Vice chairman, National Political Consultative Conference
Bo Yibo	81	Vice chairman, CCP Central Advisory Commission

SOURCES: Official publications and numerous issues of Renmin ribao (Beijing).

V. TIERS AND ECHELONS

During the past 40 years, the Chinese Communists' plan for succession has been generally based on the so-called three-echelon system. The first echelon, or tier, trains and passes power along to the second echelon, which in turn does the same with the third echelon, and so on down the line. At present, the Chinese Communist Party's self-determined echelons may be generally grouped as follows:

The *first echelon* consists of Deng Xiaoping, Chen Yun, Li Xiannian, Peng Zhen, Nie Rongzhen, Yang Shangkun, Deng Yingchao and so on, the so-called older generation of proletarian revolutionaries, most of whom are around eighty years old and all of whom are Long March Veterans.

The *second echelon* consists of Zhao Ziyang—removed from the general secretary post in June 1989—Wan Li, Yao Yilin, Deng Liqun and so on. These are the second generation party members, aged sixty to seventy years old, most of whom joined the Party during the war of resistance against Japan.

The *third echelon* consists of Jiang Zemin, Qiao Shi, Ding Guangen, Yan Mingfu, Li Ruihuan, Li Tieying, Li Peng, Tian Jiyun, and so on, 50–60 years old, some of whom entered the Party just on the eve of the Communist takeover of power, and most of whom were active in the 1950s era of close cooperation with the USSR. Most of those over forty years of age graduated from college before the Cultural Revolution.

The three echelon idea is said to have started with Chen Yun; but in 1981, Deng Xiaoping also repeatedly underscored his intention to ensure policy continuity through the promotion of successors whose personal interests were tied to the reform policy. In 1983, he flatly declared that it was necessary to build up the third echelon, referring not only to the younger generation, but to cadres on reserve and the young and better-educated people in leadership positions. These people will eventually become key political players in China.

From September 1986, criticism of the third echelon started to appear in newspapers, and there has been some indication that conflicts between third echelon cadres and the old veterans are on the rise. The sudden dismissal of Hu Yaobang in January 1987 apparently indicates that some senior leaders are disenchanted with their handpicked successors. However, the third echelon cadres are bound to take over the leadership when the first generation of revolutionaries pass away. The big question is whether the new generation of leaders will be able to manage their differences and achieve unity among themselves in the coming years.

VI. FACTIONS AND STRUGGLES

Two contending major factions have emerged since Mao's passing in September 1976, headed apparently by Deng Xiaoping and Chen Yun as respective leaders of the groups in opposition, the "Reform" and "Conservative" factions.

Deng Xiaoping is leader of the reform faction, as well as mediator between the reform and Chen Yun factions. Hu Yaobang and

Zhao Ziyang were in some respects even more reform-minded than Deng.

The Reform Faction has been the most popular, with Deng rising to power as the Party's leading guide during the past 10 years. However, its theories are inconsistent and its military basis is not stable. The Reform Faction is divided into Hu Yaobang's Communist Youth League—the most powerful reform group and Zhao Ziyang's Technical Officers League, promoting economic reform.

Among the Conservative faction are the "Rigid Ideologies" group, including Hu Qiaomu, and Deng Liqun, etc.; the ousted military leaders' group, such as Geng Biao, etc.; the Zhou Enlai faction, including Deng Yingchao (Zhou's wife), protected by Zhou Enlai during the Cultural Revolution and remaining loyal to his memory; and the Soviet Faction of Li Peng and Song Jian, ideologically proponents of the Soviet system, held in high favor by Chen Yun, Li Xiannian, and Deng Yingchao. At the present time, Li Xiannian, 85, seems to be the most influential figure in this conservative faction.

The Conservative Faction has a relatively strong military background, a large body of middle-level cadres as its power base, and a theory of a centrally planned economy. They believe that China's basic economic system should return to that of the 1950s and 1960s.

A very small neutral faction includes those who have not demonstrated a preference for either the Deng or Chen faction; those who respect Deng but not Hu Yaobang; Wan Li who has been known to be very liberal, and to have an open mind towards capitalism; and Qiao Shi who has had strong ties to Hu Yaobang, but has tried to establish his own independence during recent years. Deng Xiaoping had again taken a balancing role between the diverse elements and at the present time is shifting more towards further consolidation of the Reform Faction.

The differences in ideology and sources of support for the two major factions may be analyzed as follows:

With regard to ideology, Chen Yun's faction adheres closely to orthodox Marxism-Leninism, while Deng's faction clearly considers some elements of Marxism-Leninism outmoded. Deng's followers, however, have been wary of making specific criticisms of established Marxist principles.

Chen Yun and his followers promote the strengthening of Communist Party control in all areas. Deng Xiaoping's faction favors the separation of Party and state functions in the administration of economic enterprise, and a more prominent role for "technocrats". Deng has even proposed eliminating the Party's role in economic enterprise, an idea immediately quashed by Chen Yun and Li Xiannian.

Concerning economic policies, Chen Yun's faction would like to restore the policies in effect before the Cultural Revolution. Because they promote and defend the idea of a disciplined, centrally planned economy, they are known as the "Restoration Faction" or the "Small Birdcage Faction". Deng favors a "socialist-market" economy, in which large enterprises remain nationalized but allowed to respond to market forces. Deng's faction is thus known as the "Large Birdcage Faction".

Chen Yun's base of support lies in China's immense bureaucratic machine, which extends its reach from Beijing to every nook and cranny of the land. The machine's functionaries tend to be consciously or unconsciously against reform. The Deng faction's support comes largely from those who stand to benefit from his policies, including "10,000-yuan families", newly-rich farmers, "briefcase" merchants, individual entrepreneurs in both urban and rural areas, "agricultural specialty" families, cooperative enterprises, and young officers who have recently been promoted. All of these terms describe groups who have profitably branched out in some way from the centrally planned economy.

The bureaucratic machine that provides the social base for Chen's faction is very powerful. The social base of the reform faction lacks the organizational cohesiveness to bring its elements together as a unified force. Society is not static, however, and popular support for the reformers will increase day by day as reforms are implemented, while the "old guard" becomes more and more isolated.

VII. PRC LEADERSHIP ROSTERS

The following section lists the names of Beijing leaders as of August, 1990:

- Members of the Central Committee Politburo (listed in the order of the number of strokes in their surnames):

  Wan Li
  Jiang Zemin
  Li Ruihuan
  Yang Shangkun
  Yao Yilin
  Tian Jiyun
  Li Peng
  Li Ximing
  Wu Xueqian
  Qin Jiwei
  Qiao Shi
  Li Tieying
  Yang Rudai
  Song Ping

  Alternate Member:

  Ding Guangen

  Members of the Politburo Standing Committee:

  Jiang Zemin (Gen. Sec.)
  Li Peng
  Li Ruihuan
  Qiao Shi
  Yao Yilin
  Song Ping

  Military Commission Leaders:

  Chairman: Jiang Zemin
  First vice chairman: Yang Shangkun
  Secretary general: Yang Baibing (younger brother of Yang Shangkun)

The party conference approved the Chairman, Vice chairmen and Standing Committee members of the Central Advisory Commission elected at the Commission's first plenary meeting.

- Central Advisory Commission

  Chairman: Chen Yun
  Vice chairmen: Bo Yibo, Song Renqiong

- Standing Committee Members (listed in the order of the number of strokes in their surnames):

Wang Ping
Liu Lantao
Li Desheng
Yu Qiuli
Zhang Jingfu
Chen Yun
Hu Qiaomu
Ji Pengfei
Kang Shi‘en
Wang Shoudao
Jiang Hua
Yang Dezhi
Song Renqiong
Zhang Aiping
Chen Pixian
Duan Junyi
Huang Hua
Cheng Zihua
Wu Xiuquan
Li Yimang
Xiao Ke
Song Shilun
Lu Dingyi
Chen Xilian
Geng Biao
Bo Yibo

(Many of these members are former military officers and could be considered members of the Conservative Faction.)

VIII. Profiles of Current Key Political Players

With the dismissal of Zhao Ziyang from his post as general secretary in June 1989, the 4th Plenary Session of the 13th Central Committee announced in June 1989 that Jiang Zemin would replace him. In other significant changes in CCP leadership, Jiang Zemin, Song Ping and Li Ruihuan were elected to the Standing Committee of the Politburo of the CCP Central Committee, and Li Ruihuan and Ding Guangen became members of the Secretariat of the CCP Central Committee. Because of his personal ties with Zhao Ziyang, Hu Qili was removed from the Standing Committee of the Politburo of the CCP Central Committee. Rui Xingwen and Yan Mingfu were also removed from the Secretariat of the CCP Central Committee.

A few representative profiles of some of the key political players and Standing Committee members of the CCP‘s Politburo follow:

Deng Xiaoping, 86, is the doyen of Chinese Communist party leaders, an avowed pragmatist, and a firm advocate of innovative changes in China‘s political and economic systems. His outlook on political and economic matters is considered moderate or conservative relative to his emphasis on the primacy of an accelerated economic growth, or on the establishment of political institutions insofar as they are supportive of his economic policy objectives. He is a proponent of rejuvenating the leadership by injecting younger party stalwarts into its membership. Although he did not retain any official posts, Deng wields extensive influence and power in the conduct and operation of the Chinese governmental machinery.

General *Yang Shangkun*, 83, has been a Politburo member since 1982 and China‘s president since 1988. His basis of power is attributable to his position as permanent Vice chairman of the Central Military Commission, and close alliance with the military, including a number of family-related associates occupying senior positions in the military, such as Yang Baibing, head of the army‘s political department, and Yang Jianhua, commander of the notorious 27th Field Army which dealt a heavy blow among the student demonstrators during the Tiananmen Square unrest.

Li Peng, 63, a protege of Zhou Enlai, is Soviet-educated and considered an expert in electric power and energy resources development. He cultivated close ties with followers of Zhou and veteran Soviet-trained Chinese, as well as with influential party elders. He has been a Politburo member since 1987, a member of the Standing Committee, chairman of the State Planning Commission for Restructuring the Economic System, and premier since 1988. His underlying conservative outlook has been responsible for the rigorous economic retrenchment measures undertaken by China in the last two years. During the rising tide of student unrest unfolding at Tiananmen Square in 1989, it was Li Peng who announced the imposition of martial law on May 20 in Beijing. Li has been trying to consolidate his personal power and improve his image during the past year. Many foreign experts have predicted that Li will be replaced by a more moderate party leader, though his strong ties with the Conservative Faction, make it unlikely that he will be replaced in the near future. No doubt to improve his public image (both at home and abroad) Li has been travelling to many foreign countries during the past few months.

Chin Jiwei, 75, is minister of Defense and a member of the Politburo and the Central Military Commission. He has widespread influence and connections with the military, having served at one time as commander of Chinese army units stationed in Beijing. He is a moderate, and, like Zhao Ziyang, opposed the imposition of martial law in Beijing during the Tiananmen Square student unrest. His view was poorly received by party leaders, and has given rise to much speculation as to his future political role.

Qiao Shi, 66, has been a Politburo member since 1987 and a member of its Standing Committee. He was alleged one of the cosigners of a document critical of Zhao Ziyang's moderate stance and conduct during the pro-democracy demonstration in May 1989. His present main position is that of Chairman of the Central Discipline Inspection Commission, which is responsible for monitoring the nation's intelligence and security interests.

Jiang Zemin, 64, joined the CCP in 1946, and attended Jiaotong University (one of the best engineering colleges in China), graduating from its Electrical Machinery Department in 1947. He went to Moscow in 1955 and worked as a trainee at the Stalin Automobile Factory, returning to China in 1956. Beginning in 1980, he was vice chairman of the State Administration Commission on Import and Export Affairs, the Commission on Foreign Investment, and after 1982 became minister of Electronics Industry. During those years, he concurrently served as secretary of the leading Party members' group of both the Commission and the Ministry. Additionally, he was elected a member of the 12th Party Central Committee in 1982, mayor of Shanghai and secretary of the Shanghai Municipal Party Committee in 1985. He was elected a member of the Politburo of the Party Central Committee in 1987, and a member of the Standing Committee of the Central Committee in 1989, and General Secretary. In addition, he is also the Chairman of the powerful CCP's Central Military Commission since 1989.

Li Ruihuan was born in 1934 in Tianjin. Li is self-educated, and worked as a carpenter in Beijing and Tianjin. He joined the CCP in 1959, and beginning in 1965, served alternately as deputy secretary and secretary of the Party Committees of the Beijing Company of Building Materials, the Beijing Construction Timber Plant (1971), the Beijing Bureau of Building Materials, and successively served as vice chairman of the Beijing Capital Construction Commission, and director of the office in charge of Beijing's capital construction. Additionally, he was vice chairman of the city's trade union federation, permanent member of the All-China Federation of Trade Unions, and was elected during the intervening years a member of the Standing Committee of the Fifth National People's Congress. He was a member of the secretariat of the Central Committee of the Chinese Communist Youth in 1979, as well as a permanent member of the All-China Youth Federation. Li is currently responsible for the party's propaganda and cultural affairs. He is very popular among young workers and artists in China.

Song Ping, 73, studied agriculture at Beijing and Qinghua universities, and after joining the CCP in 1937, he served at the Central Party School in Yan'an, the Yan'an Institute of Marxism-Leninism, the Central Institute of Party Affairs, and the Party's South China Bureau. He joined the Chongqing-based Xinhua Daily and headed Xinhua News Agency's Nanking branch, and served as political secretary to Zhou Enlai. After 1947, he worked in a district Party committee, served as political commissar in Harbin, and held offices in the Harbin and Northeast China Federation of Trade Unions.

After 1952, he was a member of the State Planning Commission, served concurrently as vice minister of Labor and the Commission, and held a position in the Party's Northwest China Bureau as well as being minister of its planning commission. He was a high official in defense construction projects and national defense industry and, after 1972, was active in the revolutionary committee of Gansu Province. He served as political commissar of the Lanzhou Military Command area and of the Gansu Provincial Military Command area.

After 1981, he re-emerged as minister of the State Planning Commission, served as secretary of the Commission's Party group, State councillor, head of the Organization Department of the Party Central Committee, member of the 11th and 12th Party Central Committee, and Politburo member of the 13th PCC.

Yao Yilin, 73, graduated from Qinghua University majoring in chemistry. After joining the CCP in 1935, he served as secretary of the Party section of the Beiping Students' Federation and was one of the organizers of the Beiping students' patriotic movements against Japanese aggression. During the War of Resistance against Japan, he worked underground for the Party in Tianjin and the Shanxi-Chahar-Hebei Bureau, and spearheaded an armed uprising in eastern Hebei Province.

After 1949, he served successively as vice minister of Foreign Trade, vice minister of Commerce, deputy director of finance and trade in the State Council and, beginning in 1960, served as minister of Commerce for seven years. He became a vice premier in 1978, and for a period after 1979, served as deputy secretary-general of the CCP and director of its General Office, and retained the position of vice premier after the restructuring of the State Council in 1982. He was elected an alternate member of the Politburo in 1982, a full member of 1985, and a member of the Standing Committee of the Politburo in 1987. He is a senior economic planner and his main posts today are vice premier of the State Council and minister of the State Planning Commission. He has been instrumental in carrying out many of the new economic policies in China during the past 10 years.

IX. REGIONAL AND PROVINCIAL POLITICAL PLAYERS

Many of these influential regional and local leaders were originally from Beijing and they were transferred or reassigned to their new posts in different regions throughout China.

Among the reform leaders at the provincial level, Ye Xuanping, governor of Guangdong province, and Zhu Rongji, mayor of Shanghai, are considered as important supporters of Zhao Ziyang's reform policies. Ye is responsible for the prosperity of Guangdong where 36 percent of China's foreign trade is conducted, and millions of laborers absorb foreign investment. The province provides a crucial connection to Hong Kong. Ye's father was Marshall Ye Jianying, a powerful political figure who died in 1986. This family background has given Ye Xuanping good connections with the top leadership. As a Central Committee member, Ye held his ground last year against Li Peng's policy of retrenchment. In the recent restimulation of China's economy, Guangdong has quickly revived thousands of small business and increased production output, enhancing its economic ties with Hong Kong and foreign business.

Shanghai and its mayor Zhu Rongji, have recently become more visible in China's press. Shanghai, China's largest industrial city and at one time the country's uncontested financial, trade, and manufacturing center, was overwhelmed by the dynamic Special Economic Zones in Guangdong and Fujian in the 1980s. This year Shanghai has been on the rise. The national stock exchange and other related services are being established there. Once they are complete, the availability of equity finance will improve the environment for domestic and foreign investment. The most ambitious plan is to establish the Pudong district as an industrial, commercial and financial zone designed to push the economic development of provinces along the Yangtze River. In June, 1990 Zhu travelled to Hong Kong and explained to businessmen his preferential policies—the Pudong area would become China's first free-trade zone and the foreign banks will be allowed to operate there.

Zhu is very active both in and out of China to push the reform and takeoff of Shanghai's economy. He is propelling the construction of infrastructural projects, especially transport and construction. Zhu "cut through the swathe of red tape, ... reduced the number of department approvals to 20 from 133" through the Shanghai Foreign Investment Commission to simplify the process for foreign investment.

In contrast to central government denouncement, Zhu used vague terms to talk about the military suppression of the June 1989 demonstrations in Beijing. His image in handling the Shanghai demonstrations seemed conciliatory. On July 7, 1990, he arrived in the United States, heading a delegation of Chinese mayors for a 20-day visit. His mission was to increase Sino-American understanding, telling his American audience about China's open-door policy and its improved environment for U.S. investment.

Both Ye Xuanping and Zhu Rongji have reportedly been candidates for central government posts. Their prominent position in the most important regions of China put them on the list of future top leaders.

X. PROSPECTS AND CONCLUSION

The top leadership has been variously portrayed as contingent upon the source of power deriving from the "first-second lines" of succession men based on age or senility, the first-third echelons of leaders with operational authority in the management of government and party affairs, and members of reform or conservative factions. Out of these layers of political stratification, a strong dictator like Mao might emerge, though this is very unlikely given the trend toward collective leadership during a transition period between conservative and reform factions, and the periodic surfacing of benevolent authoritarian leadership like that of Li Ruihuan and Jiang Zemin.

Another possibility is that China may become divided along regional leadership lines, represented by the influential commanders of the country's seven military districts. Another pattern of leadership succession might be based upon leaders of component provinces favorably endowed with rich industrial-economic resources, such as Guangdong, Fujian, Shanghai, and northeast China.

Against the backdrop of an emergent new leadership, difficult questions still overshadow future prospects. What is the future for China after the first and second echelons have moved on, and the third echelon assumes full power and control of China? Who will pass away first, Deng or Chen and who will be top leader? How will major policies change with the changes in leadership? Providing specific or even tentative answers and speculations about these questions is an impossible task.

APPENDIX A

Selected List of PRC Leaders' Relatives Holding Important Positions

Bo Yibo (Vice chairman, CCP Central Advisory Commission)

Sons: **Bo Xicheng** (Director, Administrative Bureau of Travel and Tourism of Beijing City)

Bo Xilai (Vice mayor, Dalian City, Liaoning Province)

Bo Quan (General Manager, White Peacock Arts and Crafts Company, Beijing)

Son-in-law: **Jia Chunwang** (Minister, Ministry of State Security)

Chen Yi (Former Minster, Ministry of Foreign Affairs; former mayor of Shanghai)

Son: **Chen Haosu** (Vice minister, Ministry of Radio, Film and Television)

Chen Yun (Chairman, CCP Central Advisory Commission)

Son: **Chen Yuan** (Member, Standing Committee, Beijing Municipal Chinese Communist Party; CCP Beijing Municipal Party Secretary)

Deng Xiaoping (Former Chairman, CCP Central Military Commission)

Sons: **Deng Pufang** (President, The Welfare Fund for Handicapped; former Chairman, Kanghua Trading Company

Deng Zhifang (Ph.D. in physics, University of Rochester; Deputy General Manager, China International Trust and Investment Corporation - CITIC)

Daughters: **Deng Nan** (Bureau Director, State Science and Technology Commission)

Deng Rong or **Xiao Rong** (Director, Foreign Affairs Committee of the National People's Congress; Deputy Director, Personnel Office, General Staff Headquarters, People's Liberation Army - PLA)

Sons-in-law: **He Ping** (President, Poly Technologies, Inc.; former Assistant Military Attache, Embassy of the PRC to the United States; Deng Rong's husband)

Wu Jianchang (General Manager, China's Nonferrous Metals Import and Export Corporation)

Zhao Baojiang (Mayor of Wuhan City and Deputy CCP Party Secretary of Wuhan) Zhao visited the United States with the Mayors Delegation in July, 1990.

He Changgong (High ranking PLA officer; former president, CCP Society on Historical Figures)

Son: **He Qizong** (Deputy Chief of Staff, PLA General Staff Department)

He Long (Marshal; former Vice premier; former Vice chairman, Central Military Commission)

Son: **He Pengfei** (Director, Armament Department, PLA's General Staff Department)

Hu Qili (Former Standing Committee Member of the CCP's Politburo; CCP Central Committee member)

Sister: **Hu Qiheng** (Director, Institute of Automation, Chinese Academy of Sciences; Vice president, Chinese Academy of Sciences)

Hu, Yaobang (Former General Secretary, Chinese Communist Party)

Son: **Hu Liu** (Deputy Department Director, Ministry of Foreign Economic Relations and Trade) Visited the United States with a Chinese Purchasing Delegation in October 1990. He is the Deputy Director of the Technology Import and Export Department.

Li Desheng (Political Commissar, National Defense University; member, CCP's Central Advisory Commission)

Son: **Li Nanzheng** (Chief, General Staff of Shenyang Military District)

Li Fuchun (Former Vice premier, State Council)

Son: **Li Changan** (Deputy Secretary-General, State Council)

Li Peng (Premier, State Council)

Wife: **Zhu Lin** (General Manager of a company in South China)

Son: **Li Yang** (Vice president, The Industrial Development Company, Hainan Province)

Li Weihan (Former Vice chairman, CCP Central Advisory Commission; former head CCP's United Front Department)

Son: **Li Tieying** (Member of CCP's Politburo; Chairman, State Education Commission; State Councillor)

Li Xiannian (Chairman, Chinese People's Political Consultative Conference)

Daughter: **Li Haifeng** (Secretary, CCP's Shijiazhuang Municipal Committee, Hebei Province)

Liao Chengzhi (Former Director of Hong Kong and Macao Office of the State Council)

Son: **Liao Hui** (Director, Office of Overseas Chinese Affairs, State Council)

Liu Shaoqi (Former President, People's Republic of China)

Sons: **Liu Yuan** (Deputy Governor of Henan Province; Member, Standing Committee, CCP, Henan Province)

Liu Zhen (Vice mayor, Qingdao City)

Brother-in-law: Wang Guangying (President, Everbright Industrial Corporation, Hong Kong)

Nie Rongzhen (Marshal; former Vice chairman, CCP's Central Military Commission)

Daughter: **Nie Li** (Vice chairman, Science and Technology Committee, Commission of Science, Technology and Industry for National Defense)

Son-in-law: **Ding Henggao** (Minister and chairman, Commission of Science, Technology and Industry for National Defense)

Peng Zhen (Former Chairman, Standing Committee of the National People's Congress; former Mayor of Beijing)

Daughter: **Peng Peiyun** (Director, State Family Planning Commission; Member, CCP Central Commission for Discipline Inspection)

Sons-in-law; **Wang Hanbin** (Member, CCP Central Committee; Vice chairman, National People's Congress; Chairman, Committee on Law, National People's Congress)

Zhang Boxing (Member, CCP Central Committee; Party Secretary, CCP Shanxi Provincial Party Committee)

Qiao Guanhua (Former Minster, Minstry of Foreign Affairs)

Son: **Qiao Zonghui** (Deputy Secretary general, Hong Kong Xinhua News Agency)

Song Renqiong (Vice chairman, Central Advisory Commission)

Son: **Song Ruixiang** (Deputy Secretary of CCP, Qinghai Province and Governor of Qinghai Province)

Tao Zhu (Former Vice premier, State Council)

Daughter: **Tao Siliang** (Deputy Director, Sixth Bureau, CCP's United Front Department)

Tian Jiyun (Vice premier; Member, CCP Politburo)

Brother: **Tian Tizhen** (Mayor, Xinxiang City, Henan Province)

Ulanfu (Former Vice-President, People's Republic of China)

Sons: **Buhe** (Chairman, People's Government of Inner Mongolia Autonomous Region)

Wujie (Mayor, Huhehote City, Inner Mongolia)

Wang Bingqian (Minister, Ministry of Finance; State Concillor, State Council)

Son: **Wang Hui** (Mayor, Datong City, Shanxi Province)

Wang Zhen (Vice president, People's Republic of China)

Sons: **Wang Jun** (Vice chairman, China International Trust and Investment Corporation; Chairman, Planning Commission, Beijing City)

Wang Zhi (General Manager, Great Wall Computer Corporation, Beijing)

Xi Zhongxun (Vice chairman, National People's Congress)

Sons: **Xi Zhengning** (Deputy Director, CCP's Organizational Department, Shanxi Province)

Xi Zhengping (Party secretary, Ningde District, Fujian Province)

Son-in-law: **Chen Guangyi** (CCP Party Secretary, Fujian Province)

Xiao Jinguang (Former Navy Commander, People's Liberation Army)

Son: **Xiao Congci** (CCP Party Secretary, Datong City, Shanxi Province)

Yang Dezhi (General; Former chief of the PLA General Staff Department)

Nephew: **Yang Xizong** (Member, Central Committee, CCP; CCP Secretary, Henan Province; Chairman, Henan Provincial People's Congress)

Yang Shangkun (President of the PRC; First Vice chairman, CCP Central Military Commission)

Brother: **Yang Baibing** (Secretary general, CCP Central Military Commission; Director of the PLA General Political Department)

Nephew: **Yang Shaojun** (Commander, 27th Army)

Ye Jianying (Marshal; former Vice chairman of the Central Military Commission)

Son: **Ye Xuanping** (Governor of Guangdong Province; CCP Deputy Party Secretary of Guangdong Province)

Daughter: **Ye Chumei** (former Vice minister, Commission of Science, Technology, and Industry for National Defense)

Son-in-law: Zou Jiahua, State Councillor, Minstry of machine Indutry and Electronics

Daughter-in-law: Wu Xiaolan (Former Vice mayor, Shenzhen City)

Zhang Aiping (Former Minister of Defense)

Son: **Zhang Haoruo** (Bureau Director, State Council, CCP Party Deputy Secretary, Sichuan Province; Governor, Sichuan Province)

Son-in-law: **Yu Zheng-sheng** (Mayor, Yantai City, Shandong Province)

Zhao Ziyang (Former General secretary, Chinese Communist Party)

Son:	**Zhao Dajun** (Former Haihua Development Corporation, Hainan Province)
Daughter:	**Zhao Liang** (Assistant Manager, Sheraton Great Wall Hotel, Beijing)
Son-in-law:	**Wang Zhihua** (Former General Manager, Poly Technologies Incorporated)

EXTERNAL FACTORS AFFECTING THE ECONOMY

By Robert G. Sutter *

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I. OVERVIEW

Events in China leading to the Tiananmen massacre and the political crackdown and economic retrenchment in 1989 and 1990 vividly demonstrated the fault lines that run through the Chinese leadership and society over a range of sensitive domestic and foreign policy questions. Increasingly complex economic problems, rising popular expectations, and widespread disillusionment with the communist system are among the most salient domestic forces expected to test the ability of the Chinese authorities to maintain order and promote policies conducive to the effective economic modernization of the country in the 1990s. Effective administration seems especially difficult over the short term as leadership division and debate are expected to worsen amid the jockeying for power among ambitious officials as the now dominant older generation of leaders headed by 86-year-old Deng Xiaoping approaches its end.[1]

Foreign pressures are part of the equation of forces expected to complicate the development of the Chinese economy through the 1990s. Chinese leaders will have to deal with the western-aligned developed countries that have been appalled by the excesses of communist repression, skeptical of the economic advantages of close association with China in this period of domestic Chinese uncertainty, and attracted to new opportunities presented by the collapse of communism in the Soviet bloc. Some in the West are in-

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[1] For useful background on recent events in China, see *Current History*, September 1990 (entire issue); Report on Economic Sanctions Against China, 101st Congress 2nd Session; House Document 101-192. Washington U.S. GPO 1990; Testimony by Assistant Secretary of State, Richard Solomon before the Senate Foreign Relations Committee, June 6, 1990; U.S. Central Intelligence Agency, The Chinese Economy in 1989 and 1990. EA 90-10023 July 1990.

clined to press hard through economic sanctions, political activities and other measures to force a change in the Chinese system along lines favored by the West. Some authorities in China claim such westerners represent the major foreign "threat" to China in the 1990s.

A strong case can be made in support of the view that holds that such outside pressures could have a decisive impact on the course of Chinese modernization in the 1990s. Available evidence suggests that China's leaders had not anticipated the prolonged alienation from the West that has followed the Tiananmen incident. They also were caught unaware by the radical changes in Eastern Europe, the Soviet Union and in U.S.-Soviet relations. These changes have had the effect of limiting options for developing Chinese relations with the Soviet bloc as a complement to (or substitute for) heavy Chinese reliance on western-aligned developed countries. They have also reduced western interest in sustaining close ties with China.

China's leaders have been so preoccupied with maintaining internal order and control that they have been ineffective in coming up with a strategy to deal with the rapidly changing world order of the early 1990s. Beleaguered and isolated, Beijing leaders have been cut off, at least for the time being, from a large portion of the foreign assistance that used to flow to China from the World Bank, Japan and other western-aligned countries. Tourism receipts in the year after the Tiananmen massacre dropped to less than half of the previous year; foreign investment dropped and technical exchanges were curbed.

Had China been following a more self reliant development strategy, such losses and curbs might not have had a serious effect on the Chinese economy. But the post-Mao reforms saw China's economy become increasingly dependent on foreign trade and exchanges. Thus, total exports (including services) rose to 22.2 percent of China's GNP, up from only six percent in 1980. The level of China's trade relative to its total economy has far surpassed that of other large economies such as Brazil, India or the Soviet Union.

A complicated web of personal, business, academic and other exchanges fostered by the Chinese reformers in the post-Mao period now has come to be seen as threatening to the Beijing authorities. It provides conduits for the safe passage out of China for fugitives from Beijing's repression. Information about the fall of communism in the Soviet bloc, and especially the uprising in Romania and overthrow of China's close ally, Ceasescu, spread throughout cities in China. Outsiders bent on major political change or the overthrow of communism can use these connections to transmit ideas and information deemed to be subversive to the continued authoritarian communist rule. Yet, the imperative of economic modernization and the related need for information and technical support from outside China have checked the tendency shown by some in the Beijing leadership to sharply curb and tightly control this potentially threatening web of outside connections.

An alternate view of the foreign pressures faced by China and their likely effects on the Chinese economy in the 1990s holds that it is easy to exaggerate the effect of outside forces on the course of Chinese leadership and economic policy. This argument adds that the major changes in world affairs in 1989–1990 had positive as well as negative effects on the stability of China's current regime. Thus, it markedly reduced (some would say eliminated) the strategic threat faced by China from the Soviet Union; and it notably increased China's foreign policy leverage and room for maneuver vis-a-vis such important strategic areas as North Korea, Indochina and Southeast Asia. The economic sanctions and curbs on foreign assistance from the western-aligned countries have not been uniform; some countries of East Asia, notably Taiwan, have been rapidly expanding investment and trade with the mainland.[2] Positive international attention to changes in the Soviet bloc could change quickly to disillusionment if the new governing authorities prove unable to come up with effective modernization strategies. Under these circumstances, China might appear as a much better bet for foreign investment and trade.

Meanwhile, it remained unclear how far foreign governments and societies would press for change in China's repressive communist system. And it remained uncertain how people in China would react to such efforts. The fiasco associated with the ship, "Goddess of Democracy," which attempted in vain to broadcast radio programs while stationed off the China coast in June 1990,[3] seemed to demonstrate that established governments remained unwilling to press too forcefully for political change in China.

On balance, therefore, it appeared in mid-1990 that foreign pressures would be likely to serve as an important but secondary set of factors likely to complicate the development of the Chinese economy during the 1990s. Indeed, the Chinese economy had already lost some of the advantages it had derived from close association with western-aligned countries, and international and financial-economic institutions in the 1980s. Those countries and institutions appeared to be unlikely to return to China with the same vigor and enthusiasm, even if China's policies were to return to the pragmatic reform efforts of the 1980s. This "opportunity cost," and other costs to China's modernization associated with the radical changes in world affairs in 1989–1990, were important; but they seemed less important than domestic factors in determining the course of China's modernization and development in the decade ahead. International developments appeared to serve to reinforce domestic pressures affecting the Chinese economy, but, in and of themselves, they seemed to be unlikely to be decisive in determining the course of China's development.[4]

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[2] See *Financial Times*, June 6, 1990. See also reviews of this issue in August-September 1990 editions of the Far Eastern Economic Review.

[3] See the blow-by-blow coverage of this issue in the *Far Eastern Economic Review*.

[4] Historical comparisons are often inaccurate, because of changing circumstances and other factors. Nevertheless, it is useful to remember that foreign pressure, on its own, only rarely has been decisive in determining Chinese domestic policies, including economic policies. Perhaps the best recent example of foreign pressure causing major changes in domestic policies came in the late 1960s when the Sino-Soviet border clashes escalated to a point where the U.S.S.R. directly threatened to attack China with conventional forces and with nuclear weapons, and China was in no position to defend itself on account of military dislocations and international isolation caused by the Cultural Revolution. This crisis led to major changes in Chinese foreign and domestic policies. It is very hard to imagine Chinese leaders seeing the international pressures they face today as anything like the threat they faced in the late 1960s.

II. POST MAO FOREIGN RELATIONS AND ECONOMIC MODERNIZATION, 1978–1989

Post-Mao leaders followed general policy lines set at the third plenum of the 11th Central Committee: They viewed effective economic modernization as their primary goal; they understood that their success or failure politically would be determined to considerable measure by their ability to advance the wealth and power of China. As a result, all policies, including foreign policy, were geared to serve this effort.[5]

Chinese foreign policy supported China's quest to achieve economic modernization as effectively as possible in two basic ways. On the one hand, it helped to promote economic contacts with various countries that could benefit China's modernization. On the other hand, it helped to maintain a stable and secure environment in Asian and world affairs that was conducive to Chinese modernization efforts. In this context, Chinese leaders put aside ideological and other constraints to beneficial economic and technical interchange with a wide range of developed countries. They halted or cut back support to Maoist insurgents or political groups that would impede smooth economic exchanges abroad; cut back sharply on Chinese foreign assistance to the Third World; and showed an increased willingness to softpedal past Maoist pretensions to change the world.

Chinese leaders focused their foreign policy concerns on establishing a "peaceful environment" around China's periphery in Asia. China did not control that environment, which remained more heavily influenced by the Soviet Union, the United States, their allies and associates. Since the late 1960s, China saw the main danger of instability and adverse development in Asia coming from the Soviet Union or its allies and associates. And it continued to see reasonably close Chinese relations with the United States, Japan and other non-communist countries as useful to support Chinese security in the face of real or potential pressure.

By the late 1980s, international trends and Beijing's relationships abroad were widely seen to have developed in ways advantageous to Chinese economic modernization:

- Chinese leaders saw the strategic environment around their periphery as more stable and less likely to be disrupted by a major international power than at any time since the 1960s. This development came as a result of changes in Soviet foreign policy, especially those begun by Mikhail Gorbachev in 1985, and continued firm western-backed efforts to check Soviet expansion abroad. Of course, the reduced big power threat did not preclude danger posed by possible conflicts between China and its neighbors over territorial disputes or other issues. Nor did it automatically translate into growing Chinese influence in Asia. Regional economic and military powers (e.g. Japan, Indonesia, India) were becoming more prominent in asserting their influence as East-West and Sino-Soviet tensions subsided.

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[5] See, *China's Economy Looks to the Year 2000.* U.S. Congress Joint Economic Committee, 1986. Two Volumes.

- Regional security trends were generally compatible with China's primary concern with internal economic modernization and political reform. So long as the regional power balance remained stable and broadly favorable to Chinese interests, Beijing was likely to continue to give the pragmatic development of advantageous economic contacts top priority in its foreign affairs.
- Ideological and leadership disputes had less importance for Chinese foreign policy than in the past. Although Chinese leaders divided between more conservative-minded officials and those who were more reform-minded, the differences within the leadership over foreign affairs had lessened markedly over the past 20 years.
- Reinforcing the more narrow range of foreign policy choices present among Chinese leaders, China had become more economically dependent on other countries, especially the western-aligned, developed countries, than in the past. Particularly as a result of the new openness to foreign economic contacts and the putting aside of Maoist policies of economic self reliance, Beijing had come to see its well-being as more closely tied to continued good relations with important developed countries, notably Japan and the United States, and associated international financial institutions. They provided the assistance, technology, investment and markets China needed to modernize effectively.

Chinese policy planners were on the whole sanguine about China's ability to continue modernization with ample support from the non-communist developed countries and without major disruption to the "peaceful environment" in Asia. Strategically, China was seen as likely to play an increasingly important role as part of an emerging multi-polar world as the contending superpowers, the United States and the U.S.S.R., slowly declined in power relative to other parts of the world. Since Moscow and Washington were expected to remain at odds, they were both thought to be strongly interested in working closely with China and other newly emerging centers of world power (i.e. Western Europe and Japan). Thus, China remained sought after by both superpower adversaries in the U.S.-Soviet-Chinese triangular relationship.

China's location at the center of the most economically dynamic part of the world gave Beijing confidence in China's growing economic as well as continued strategic importance. China's ongoing economic reforms were attracting increasing international attention and support among developed countries and international financial institutions supported by them. China looked forward to even more generous largescale assistance from the World Bank and Japan, as well as growing fruitful economic interaction, technology transfer and training in Chinese relations with the United States, Japan, Western Europe and the non-communist countries of East Asia. Beijing looked forward to the benefits associated with membership in the GATT, and assistance from the Asian Development Bank and other such organizations. Meanwhile, easing Sino-Soviet tensions opened up prospects for broad economic cooperation with the Soviet Union and Eastern Europe.

III. FOREIGN DEVELOPMENTS COMPLICATING CHINA'S SEARCH FOR STABILITY AND MODERNIZATION

Beijing's leaders clearly recognized that much of the non-communist world would react negatively to their decision to crack down on the pro-democracy demonstrations in Beijing and other cities in mid-1989. They almost certainly expected some negative reactions to the intensification of China's concurrent economic retrenchment. Available evidence suggests that party leaders judged that their continued political control required such harsh measures; and at least some felt that sharp negative reactions from the West and elsewhere would pass without longterm consequences for Chinese economic modernization. In particular, Chinese leaders at a conference of returned ambassadors in July 1989 set forth the view that China basically had to wait for a short period in order to allow the storm of international protest over the crackdown to pass. They remained confident that Japan, the United States, the other western-aligned countries and the international financial institutions associated with them would soon restore ties with China because of China's strategic and economic importance.[6]

It is not clear whether or not this Chinese prediction would have come true in late 1989 if other world conditions had not changed. But events in Eastern Europe and the Soviet Union markedly upset the Chinese calculus; they led international factors likely to seriously complicate Chinese modernization efforts into the 1990s.

The rapidly changing political, economic and security policies in the Soviet Union and Eastern Europe in late 1989 and 1990 added to the complications faced by Chinese leaders following their crackdown on pro-democracy demonstrations in Chinese cities in spring 1989. The changes in the Soviet bloc had an obvious "ripple effect" in China, encouraging pro-democracy forces and alarming Chinese leaders who were determined to maintain the monopoly of power held by them as leaders of the Chinese Communist Party. They dampened signs of Chinese interest in pursuing closer ties with the Soviet bloc as a means to balance China's recent strong reliance on economic, technical, and other contacts with the non-communist countries of the West, Japan, and other parts of Asia. (Some in China and abroad had speculated in 1989 that Beijing could offset, to some degree, the sanctions imposed by the western powers and Japan in the wake of the mid-1989 Beijing crackdown by relying somewhat more on growing contacts with the Soviet bloc. At the time, it appeared that economic-technical contacts with the communist-ruled European countries would be accompanied by less of the "spiritual pollution" of pro-democracy ideas challenging the status quo in China. The events of late 1989 and 1990 in the Soviet bloc vividly demonstrated to all in China that the political ideas coming from Eastern Europe were perhaps more directly challenging to the political status quo in China than were the ideas from the West.)

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[6] See discussion of this view in *Crisis in China: Prospects for U.S. Policy*. Report of the Thirtieth Strategy for Peace, U.S. Foreign Policy Conference. The Stanley Foundation. October 19-21, 1989. 19 pp.

The changes in Eastern Europe and the Soviet Union prompted a strong reaction and attracted positive attention from the developed countries of the West and Japan, and the international financial institutions and businesses associated with them or located there. This had a strong indirect effect on China. Thus, not only did the PRC crackdown and accompanying Chinese economic retrenchment alienate the political, business and foreign assistance decisionmakers in the non-communist developed countries and in international financial institutions, but the positive prospects in Eastern Europe served as a magnet to divert their resources away from places like China and toward Eastern Europe and the USSR.

A. SHIFTS IN WORLD POLITICS

On the plane of world politics, the events of 1989–1990 altered the balance of forces in the world that Beijing had been reasonably effective in dealing with, especially over the last 10 years. Heretofore, the Chinese world view had been premised on an international order heavily influenced by the two superpowers, the United States and the U.S.S.R., who would remain in protracted contention or rivalry for the foreseeable future. Because of their rivalry, the superpowers would spend resources on weapons, foreign bases, foreign interventions, and in other ways that would weaken their power relative to newly rising centers of world power such as Japan, the European Community, and China. Given its size, strategic location, large armed forces possessing nuclear weapons, and its demonstrated willingness to use force to pursue its interests in world affairs, China had been seen by many in China and abroad as holding a key position in world politics.[7] It was seen as one corner of the "strategic triangle" in U.S.-Soviet-Chinese relations, or as a critical balancing force between the United States and the U.S.S.R. As such, policymakers in Washington and Moscow paid close attention to Chinese policies for fear of driving China into the arms of their main adversary. Of course, the zero-sum game quality of U.S.-Soviet-Chinese relations varied over time; by the late 1980s, for example, policymakers in Washington appeared confident that the slowly emerging Sino-Soviet detente would not have major deleterious effects on U.S. interests. But the fact remained that U.S. policymakers, and presumably Soviet policymakers, continued to pay close attention to how China's policy affected their respective interests in the U.S.-Soviet competition for world influence.

By mid-1990, the relations between the United States and Soviet Union had changed to such a degree that observers in China and elsewhere could no longer safely assume that U.S.-Soviet rivalry would continue as an overriding international fact into the 1990s. Because of events in Eastern Europe and the U.S.S.R., it was becoming increasingly apparent to western leaders that the U.S.S.R. was unlikely to pose a major threat to the West for some time. Faced with enormous difficulties at home and abroad, the Gorbachev administration was cutting back on overseas commitments, deployment of troops, military spending, and other policy areas sensitive to the West. Moscow was actively encouraging political reform in Eastern Europe and in the Soviet Union that seemed likely to make the new governments in Eastern Europe and the administration of the U.S.S.R. more responsive to the desires of the people there to pursue a better material life, with greater freedom of expression and human development. Even though there remained a persisting danger of reversal of policies, should Gorbachev be toppled or under other possible circumstances, it seemed likely that the United States and its allies would find the Soviet bloc more accommodating than confrontational in dealing with heretofore difficult world problems like strategic arms control, force reductions in Europe, and differences over international "hot spots" such as Afghanistan, Cambodia, and others.

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[7] Chinese foreign policy expert Huan Xiang and U.S. commentator Henry Kissinger were notable proponents of this view in the latter 1980s.

Under these circumstances, the United States could increasingly see its interests as better served by encouraging these accommodating Soviet policies. Thus, the dynamic of U.S.-Soviet rivalry, which had been so central to China's world view, was in the process of fundamental change. China had a long record of concern over possible U.S.-Soviet collaboration in world affairs. Chinese officials in the past had portrayed such collaboration as coming at the expense of lesser powers, especially those in the Third World, including China. There were some signs in recent Chinese media coverage that Beijing saw a revival of U.S.-Soviet collaboration at the expense of the Third World.[8] Regardless of how Chinese media wished to portray the recent trends in U.S.-Soviet relations, Beijing leaders almost certainly had to consider possible logical conclusions coming from recent trends in East-West relations. At a time of rapidly improving U.S.-Soviet relations, both powers would likely see their interests as best served by avoiding actions with countries of lesser importance (including China) that could complicate the improvement in East-West relations.

This line of argument appeared to be particularly relevant in explaining Gorbachev's somewhat more cautious approach to China after mid-1989. Since coming to power in 1985, Gorbachev had used various means to pursue improved relations with China as a key element in Soviet efforts to ease tensions around the periphery of the U.S.S.R. and to use the opening to China as a means to break out of Moscow's isolated position in Asia. Events of 1989 and 1990 changed that calculation to some degree, and seemed to lower the priority of improved Sino-Soviet relations in Gorbachev's calculations. (As noted above, Chinese leaders also became more wary of the "spiritual pollution" associated with increased contacts with Soviet bloc countries and the U.S.S.R.) Gorbachev pulled back from China after the Tiananmen massacre for fear of sending the wrong signal to those at home and in the Soviet bloc regarding his intentions concerning political reform. At the same time, Gorbachev almost certainly was aware that an expedient Soviet effort to move closer to China at a time when Beijing hardliners had deeply offended the sensibilities of leaders and public opinion in the West would call into question, in the minds of Westerners, the Soviet leader's ultimate objectives in international affairs. As a result, such an expedient effort would have run the risk of causing western officials to be less forthcoming when considering arms reduction, technology transfer, trade and financial assistance policies favorable to the U.S.S.R.

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[8] See for instance, *Liowang Overseas Edition*. Number 2, January 7, 1990, p. 28.

B. POSSIBLE U.S.-SOVIET COLLABORATION IN ASIA

In mid-1990, it remained to be seen how far the nascent trend of increasing collaboration in U.S.-Soviet relations would go. Much would depend on Gorbachev's ability to weather the internal crises and likely political challenges coming from the checkered development of his reform program. Nevertheless, Chinese leaders almost certainly considered that U.S.Soviet relations might continue the pace of improvement seen over the previous year. Under these circumstances, both sides—Moscow and Washington—would likely see their interests as best served by mutual accommodation to deal with international troublespots. In Asia, these troublespots included Afghanistan, Cambodia, and Korea. Both sides showed increasing interest in 1990 in cooperating together or working in parallel in order to ease tensions or settle conflicts in these areas.

The trends in China since mid-1989 also represented a troublespot for policymakers in Moscow and Washington. Both superpowers would have preferred to see a return to a more open, reform-oriented, political, economic, and foreign policy approach in China. Leaders in the United States and the U.S.S.R. were determined to do what they could to encourage such a return to reform in China, without jeopardizing their respective interests vis-a-vis the PRC. Against this background, PRC leaders were forced to deal with a logical outgrowth of these recent trends. That is, both Washington and Moscow might increasingly see it in their interests to exchange information and coordinate their policies toward China, in the interests of fostering an international environment conducive to the resumption of Chinese reform. The United States for many years had carried out coordination of policies with Japan on issues relating to China. If U.S.-Soviet relations continued to improve and China remained a common trouble spot for both powers, one could not exclude the possibility of U.S.-Soviet coordination over China policy in the period ahead.

Of course, any such coordination would have to be carried out very discreetly in order to avoid offending PRC nationalistic sensitivities. Chinese sensitivities would be all the greater because such U.S. collaboration with Moscow would signal a fundamental change in the common strategic orientation that had bound Sino-U.S. relations since the Nixon-Mao rapprochement. Despite differences over a wide range of issues, China and the United States were able to reach common ground in the early 1970s on their fundamental opposition to Soviet expansion in Asia. Historically concerned that a balance of power be maintained in Asia, and no longer able to sustain its longstanding containment system in Asia, the United States under President Nixon looked to a China independent of the U.S.S.R. in order to maintain a favorable balance in Asia as U.S. forces were withdrawn from Asia under terms of the Nixon doctrine. Facing a major security threat from Soviet forces threatening to invade China under terms of the so-called Brezhnev doctrine, Mao's China saw common ground with the United States, which now seemed more interested in accommodation than confrontation with China.

This common Sino-American understanding continued with varying degrees of activity for two decades. As the Soviet threat to both China and the United States appeared to diminish in the 1980s, both sides adjusted their policies accordingly but still kept in close touch about their respective and often parallel policies vis-a-vis the U.S.S.R. Indeed, the December 9-10, 1989, trip to China of National Security Adviser Brent Scowcroft was initially described as one in a long series of U.S. efforts to keep Chinese leaders fully informed about Soviet policies as seen in U.S.-Soviet arms control and summit negotiations.

Taken together with the downturn in U.S.-PRC relations as a result of the repression in China since mid-1989, the events in Eastern Europe and the U.S.S.R. and resulting changes in Soviet policy held out the distinct possibility of a challenge to this basic anti-Soviet basis of Sino-American policy in Asia. If trends in Soviet accommodation of western interests continued, U.S. policymakers would increasingly see more to be gained from collaborating than contending with the U.S.S.R. over Asian problems. In so far as China followed policies of internal repression, economic retrenchment, and support for such unsavory foreign clients as the Khmer Rouge, U.S. and Soviet policymakers might see their interests as better served by quiet cooperation and coordination of policies designed to foster an atmosphere conducive to a return to economic and political reform in China and to achieve common U.S.-Soviet goals of stability and progress in Asia.

C. DOMESTIC FACTORS AFFECTING FOREIGN INTERACTION WITH CHINA

Policymakers in the United States, Western Europe, Japan and the newly pluralistic and increasing democratic governments of Asia and Eastern Europe do not make foreign policy decisions in a vacuum. They are often heavily influenced by public opinion, the media, interest groups, and the representative members of their respective legislative bodies. In the case of the United States and Western Europe, developments in China and Eastern Europe during 1989–1990 had a profound impact among these groups. The result tended to reinforce the shifts in world politics noted above in ways that appeared to add pressure on China's current leaders and to complicate the prospects of China's economic modernization.

In the United States, for example, the American people, media, interest groups, and, to a considerable degree, U.S. legislators place a strong emphasis on morality or values as well as realpolitik or national interest in American foreign policy. Thus, when the United States moves closer in policy to a heretofore alienated power or powers, these U.S. groups want to see the righteousness of this move, hopefully in terms of common values like freedom, democracy, and free enterprise that are fundamental to the American experience. In the case of the opening to China, American opinion generally accepted the strategic need for the United States to move more closely to China at a time of U.S. withdrawal and strategic realignment in Asia. But China was kept at a distance and full normalization did not take place until the late 1970s. At that time, the U.S. move was justified in part by evidence that post-Mao China was reforming both economically and politically. Deng Xiaoping was seen moving China in directions that not only served U.S. security interests in dealing with the expanding power of the U.S.S.R. and that of its proxies in Asian and world affairs, but also in directions in domestic Chinese policies that fed the longstanding U.S. hope to promote a more democratic and prosperous China.

The Tiananmen massacre and crackdown on unprecedented pro-democracy demonstrations in China in mid-1989 sharply alienated American opinion. The leaders in Beijing were now widely seen as following policies antithetical to American values and therefore as unworthy of American support. The rapidly changing U.S.-Soviet relationship, meanwhile, generally meant that there was no longer evident a realpolitik or national security rationale of sufficient weight to offset the popularly held revulsion with Beijing's leaders and their repressive policies.

The other side of the world, meanwhile, saw political, economic and security changes that attracted wide and generally positive attention on the part of American people, media, interest groups, and legislators. Eastern Europe and the Soviet Union were increasingly following policies of reform in their government structures and economies that seemed to be based on values of individual freedom, political democracy and economic free enterprise valued in the United States. As a result, these American groups tended at times to push U.S. decisionmakers to be more forthcoming in negotiations and interaction with their East European and Soviet counterparts involving arms control, trade, foreign assistance, and other matters.

The importance of this shift in domestic U.S. opinion regarding China and the Soviet bloc countries appeared to be greater than it might have been in the past in determining the course of U.S. foreign policy. Most notably, since the start of the Cold War, the executive branch had been able to argue, on many occasions quite persuasively, that such domestic U.S. concerns with common values should not be permitted to override or seriously complicate realpolitik U.S. interests in the protracted struggle and rivalry with the U.S.S.R. Now that it was widely seen that the Cold War was ending and the threat from the U.S.S.R. was greatly reduced, the ability of the executive branch to control the course of U.S. foreign policy appeared somewhat less. Thus, there were instances in 1989 and 1990 where domestic factors seemed to push the Bush administration to be much more generous than it had initially planned in giving assistance to reforming East European countries. The President's efforts to sustain Sino-U.S. relations at a level higher than deemed appropriate by Congress and much American opinion resulted in great controversy and a cutback in Administration initiatives. A lesson from these events was that domestic factors were likely to be even more important in determining U.S. foreign policy in the period ahead. The ability of the Administration to argue that the dangers of Cold War contention and confrontation required a tightly controlled foreign policy within the executive branch would hold less weight and force the Administration to broaden the circle of actors brought into consultations on foreign policy issues.

Of course, it is unfair to generalize from an U.S. example to make a case for domestic factors influencing behavior of other western-aligned developing countries. Indeed, as is explained below, many U.S. allies and associates in Asia, notably South Korea, Pakistan, Thailand and the Philippines, were careful to keep contacts open with Beijing in the immediate aftermath of the Tiananmen massacre and to avoid association with U.S.-backed sanctions against Beijing. Nevertheless, Japan and the large developed countries of Europe and the international financial institutions associated with them continued to work closely through mid-1990 in limiting economic interchange favorable to China. The reasoning of each government and institution differed according to circumstances. While Japanese people were shocked by Beijing's crackdown, they did not usually press their government to use economic sanctions. But Tokyo chose not to break ranks with Washington in a way that would add friction to an already difficult U.S.-Japanese relationship. The West European people were often quite vocal in pushing their governments to stern actions against China, although the magnet effect of the emerging changes in Eastern Europe and the U.S.S.R. was probably even more important in placing limits on West European interchange advantageous to China.

IV. FOREIGN DEVELOPMENTS SUPPORTING CHINA'S SEARCH FOR STABILITY AND MODERNIZATION

Since mid-1989, analysts of Sino-foreign relations in the United States and elsewhere have generally emphasized how the world changes and international pressures noted above have brought about a series of crises for Beijing's leaders that have challenged the leaders' ability to rule and to carry out the effective modernization of the Chinese economy. What has not received as much attention is an alternate analysis of recent world trends, and China's reaction to those trends. This view tended to play down the likelihood that foreign pressures would lead to major crisis in China. It noted that amid these challenges to Beijing's rule and modernization lie offsetting trends and even important opportunities.[9]

Most important among emerging world trends likely to work to the advantage of China's current rulers were those that relate to the declining military threat to China. Throughout its history, the People's Republic of China had seen itself facing a substantial and often imminent military danger, usually in the form of the United States and/or the Soviet Union. Since the late 1960s, Beijing focused on the U.S.S.R. as its main strategic adversary. Trends in the 1970s and 1980s prompted China to downgrade the immediate threat posed by the U.S.S.R., but Chinese military planners still saw a strong need for active military modernization and vigilance to prepare to meet the threat from the north.

The collapse of the Soviet empire in Eastern Europe and the massive internal challenges to Gorbachev's rule clearly reduced substantially any near term military danger posed to China from the Soviet Union. Chinese military planners remain wary of Moscow, and keep a sharp eye on the growing military power of regional powers like Japan and India. Hardline Chinese leaders also see a "threat" to China's stability posed by U.S. ideology, but they see no sign of U.S. interest to use military means to pressure China.

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[9] See, for example, weekly coverage of China in *Far Eastern Economic Review* during August-September 1990.

Thus, trends in the 1990s appeared likely to provide the Chinese leadership with their first significant "breathing space," free from superpower threat, since 1949. Although it was unclear if any significant Chinese "peace dividend" would result in greater Chinese spending on economic modernization, it appeared likely that the Beijing leaders would have an easier time than at any period since the establishing of the PRC to meet the prime demand on Chinese rulers—i.e. to safeguard the integrity and sovereignty of China.

The decline in Soviet power also provides Chinese rulers with opportunities to exert greater influence in areas around China's periphery that have historically been seen as most important to China's security and national pride. Gorbachev's June 1990 meeting with South Korea's President No Tae-Woo was widely interpreted as motivated by the Soviet Union's weak economy and dire need for international economic support. The meeting also capped a rapid decline in Soviet-North Korean relations as Kim Il-song reacted negatively to Gorbachev's support for the radical changes in Eastern Europe and the U.S.S.R. A consequence for China in this new, more fluid situation was to increase China's ability to exert influence in North Korea. It also presumably gave Beijing more leeway to improve economic relations with South Korea, without fear of driving Kim Il-song into the arms of the U.S.S.R.

In Indochina, another area of historically vital importance for China's security and national interests, the decline in Soviet power and changes in Eastern Europe began to result in cutbacks in Soviet bloc support for Vietnam and the Vietnamese-backed government in Phnom Penh. This coincided with widely publicized Vietnamese efforts to reach a compromise in their longstanding disputed relationship with China. Many analysts directly linked the Soviet changes with greater Vietnamese flexibility toward China, although there are many factors which influence the situation in Indochina. It appeared that continued decline in Soviet power and involvement in Indochina were likely to add to Chinese influence in this part of Asia in the 1990s.

Trends in Hong Kong and Macao showed no sign of challenging the attainment of China's longstanding nationalistic goal to recover sovereignty over these two territories in the 1990s. Beijing rulers were often seen as maladroit in managing the acute crisis of confidence in Hong Kong which followed the Chinese June 1989 crackdown. The reported exodus of capital and trained personnel from Hong Kong posed serious problems for the territory's ability to continue to prosper in the highly competitive East Asian economic environment. But the fact remains that Hong Kong is likely to continue to grow in the 1990s. And Hong Kong's investment in the PRC was also likely to continue to grow. Those Chinese leaders associated with the process of assimilation of the valuable territory to

Chinese rule were likely to gain political benefit where it really counts, inside China.

Regarding international economic pressures faced by China, it is important to note that the substantive effects of various sanctions imposed after the Tiananmen incident were mixed. The strength of the sanctions also appeared likely to lessen as more foreign countries and firms tried to restore or develop more normal business interchange with China. Most trade and investment sanctions directed against China were symbolic in nature. The hiatus in World Bank and Japanese foreign aid had a serious effect on Chinese development plans, which had benefitted from the past generous support from both sources. Some World Bank and Japanese aid was transmitted to China in the year after the Tiananmen massacre, and officials at the Bank and in Tokyo were anxious to follow through with gradually expanding aid programs in China, provided conditions in the PRC did not markedly deteriorate.

Decline in foreign investment, tourism and other economic interaction with China began to reverse in 1990. Most notable was the flow of visitors and investment from the nearby newly industrialized Asian economies, especially Taiwan. By the end of 1989 more than 1,000 Taiwanese companies reportedly had invested $1.1 billion in China, and Taiwanese investment exceeded that of the United States and Japan, accounting for more than 60 percent of all foreign investment in the mainland in early 1990.[10] China's leaders were giving special treatment to visiting Taiwan entrepreneurs, with Deng Xiaoping meeting personally with Taiwanese plastic magnate Y.C. Wang to complete arrangements for a major plastics plant in Fujian. Total indirect trade between Taiwan and the mainland amounted to $3.7 billion in 1989 and was heavily in Taiwan's favor. Meanwhile, trade between China and South Korea remained high, at about $4.5 billion in 1989, and the Koreans were continuing to make modest investments in China. Chinese trade with the United States and Japan seemed likely to remain flat or grow modestly in 1990 while the investment picture with these countries was mixed.

Beijing's relatively moderate reaction to the major international challenges and events of 1989 and 1990 added to the arguments of those who saw foreign pressures, in and of themselves, as unlikely to force significant changes in Chinese policy. Although subjected to intense political and economic pressures at home, and facing great uncertainties and rapidly changing events abroad, Chinese leaders in 1989 and 1990 did not fundamentally alter the comparatively moderate course of Chinese foreign policy of the past decade.Thus, much of the basic framework that governed Chinese foreign policy in the post-Mao period remained in tact.

- The top priority of current Chinese leaders remained to promote China's wealth and power. This development still represented a linchpin determining their political success or failure. They did not have the prestige of Mao, who could ignore development needs in pursuit of ideological or political goals. These officials had to produce concrete results in order to stay in power.

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[10] *Financial Times*, June 6, 1990.10.

- All policies, including foreign policy, had to serve this goal. Foreign policy still did this in two basic ways.
  a)It helped to maintain a stable security environment around China's periphery. In the past, China worried a lot about the Soviet Union as the main threat to China's periphery. Even though the Soviet danger had declined, China needed to pay close attention to other potential sources of instability—i.e. Korea, Indochina, India, and Japan.
  b)It helped to promote advantageous economic exchanges. Beijing continued this policy while at the same time it tried to pull back from some contacts or regulate them because they were accompanied by potentially dangerous political or social ideas. The continuation of this basic framework suggested a China that was not looking for trouble; rather, it suggested a China that was looking for help.

Beijing's ability to deal with foreign challenges moderately, and to avoid actions that would seriously complicate Sino-foreign relations and exacerbate tensions affecting the Chinese economy in the 1990s, appeared to be based on several factors, including:

- PRC leaders' awareness of their need to focus on economic development and to pursue open interaction with the world to achieve that goal was underlined by their knowledge of the accomplishments of Japan and many other non-communist East Asian states, and their knowledge of the negative development experiences of the rigid communist regimes in North Korea and Vietnam.
- Despite sanctions enacted by the West and Japan, the non-communist world, especially the countries of East Asia, made clear that they had no intention of isolating China. They remained interested in mutually beneficial economic interchange that would grow at a pace determined heavily by China's willingness to remain open to economic interaction with the outside world.
- Soviet bloc changes meant that China could not hope to turn to these countries for support for economic development if Beijing were to decide to cut back economic interchange with the non-communist world.
- The PRC leadership appeared divided and in transition from one generation to another. Making significant changes in foreign policy in most areas remained sensitive politically. It called attention to a leader and made him or her vulnerable to counterattack by opponents in the leadership. Past periods of similar leadership transition (e.g. 1973–1975, 1976–1978) did not see marked changes in foreign policy.
- Leaders who actively promoted reform, interaction with the world and cooperation with the West in the past were not prominent, but they had not been removed from power.
- Even so-called hardliners had proven records of following relatively moderate foreign policies and related defense and domestic policies. Few appeared to favor a return to policies of isolation, autarchy or Stalinist control that were tried but failed in China in the past.

V. PROSPECTS

Christopher Clarke has laid out a series of scenarios that describe how domestic and foreign pressures are likely to affect the course of China's economic modernization in the decade ahead.[11] Most of his predictions rightfully emphasize the difficulties facing Chinese leaders as they deal with largescale internal difficulties and international uncertainties while attempting in the process to construct a stable new "social compact" with the Chinese people following the seeming betrayal of faith and loss of legitimacy in June 1989. The big question for this chapter is to what extent foreign developments and Beijing's reaction to those developments are likely to complicate the difficulties faced by China's leaders and their efforts to promote China's economic modernization.

Carefully weighing international factors likely to complicate or to support China's search for stability and economic modernization suggests that international pressures will have a negative effect on China's future. They will exacerbate the deep economic, social and political problems that will continue to hamper China's drive for economic modernization. Nevertheless, these foreign pressures are unlikely to become of sufficient weight—in and of themselves—to prompt major changes in Chinese policy. Indeed, the international situation in the 1990s promises important opportunities as well as challenges for China's leaders. Even if these leaders become preoccupied with internal conflicts and jockeying for power as the "old guards" die off, Beijing appears reasonably well positioned to weather the challenges posed by a changing world. Despite the turmoil of the past year, Beijing has used international opportunities with reasonably effectiveness, or at least has avoided egregiously counterproductive behavior in the face of foreign challenges. As a result, it appears fair to say that the foreign situation—on its own—will allow Beijing to "muddle through" and meet its basic economic modernization goals regarding the growth of national GNP in the 1990s.

Of course, there are major "opportunity costs" for China in following Beijing's current strategy. The Chinese have already felt some of those costs in the slowdown of foreign investment, aid, trade and other exchanges. The priority that developed countries gave to providing benefits for China will continue, on the whole, to move in directions of less benefit for China. Membership in GATT, the granting of new trade privileges (e.g. U.S. granting GSP treatment to Chinese imports), and aid flows from Japan and international organizations will remain hampered by foreign reaction to Beijing's internal policies and distractions posed by the new regimes in Eastern Europe and the changes in the Soviet Union. A shift toward greater democratization and economic reform in China, foreign disillusionment with failing economies in Eastern Europe and the U.S.S.R., or other possible developments could improve China's ability to attract aid, trade and investment from developed countries. But the fact remains that Beijing's leaders, even if they are successful in muddling through the 1990s, will have lost substantial opportunities that would have enhanced the modernization of China's economy. They will be leading a Chinese government and economy less important and influential internationally than it would have been had Beijing been able to continue reform and avoid the repression of 1989.

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[11] Please see article by Christopher Clarke, on page 1.

COMMENTARIES

CHINA'S BIGGEST PROBLEM: GRIDLOCK, NOT REVOLUTION

By David M. Lampton *

In early 1987 I wrote that China was "driving beyond the headlights"—that the problems associated with rapid change were mounting so fast that the society and polity were going to hit a wall before its presence was fully visible.[1] While no one could have, nor did, predict the timing or the magnitude of the impact, China hit that wall in the Spring of 1989; the casualties were severe and numerous. In all probability, China will hit more such walls.

However, in recognizing the grave problems China faces, and the human toll its modernization will exact in the future, we should not make the mistake of thinking China is a political and social volcano waiting to erupt in the next few years. It is not in a pre-revolutionary state now or in the mid-term. Although there will be violence and unrest in the future, it will be episodic, localized, and manageable in the short and medium terms, albeit at possibly considerable cost. Moreover, there will be abrupt policy changes, with the likelihood that reform impulses will become stronger over time.

Nonetheless, I am uneasy with the cumulative impression left by the chapters in this section. While each author argues that a variety of outcomes are possible, a proposition with which I certainly could not disagree, in the aggregate the preceding chapters portray the People's Republic to be more fragile than I believe it is, at least for the next five or so years.

The chapters in this section have accurately catalogued a staggering array of problems facing the People's Republic: rising budgetary deficits; a money supply that threatens rekindled inflation; diminished legitimacy of the national authorities in the wake of June 4, 1989; unemployment and underemployment of enormous absolute magnitude; rising popular expectations amidst the reality of a real decline in the incomes of about 20 percent of the urban populace and (in the first half of 1990) a 4% income decline among peasants; mounting regional and social inequalities; alienation among intellectuals; little progress in increasing enterprise productivity and the resultant need for huge government subsidies to cover enterprise losses (33 percent of state enterprises lost money in the first half of 1990); a government fearful of engaging in the political reform that would provide avenues for the peaceful and constructive expression of popular sentiment; an inability of political leaders to agree on how to manage the transition from a planned to a more market-oriented economy; a succession crisis in which neither the institutions for the peaceful transfer of power exist nor an heir to Deng Xiaoping visible; a less supportive international environment; and, a hemorrhage of power to China's provinces, raising the fearful specter of diminished national integration.

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* David M. Lampton is president of the National Committee on United States-China Relations in New York. The views expressed in this article are his own, not those of the National Committee, its members, or sponsors.

[1] David M. Lampton, "Driving Beyond the Headlights: The Politics of Reform in China," in David M. Lampton and Catherine H. Keyser, eds., *China's Global Presence* (American Enterprise Institute: Washington, D.C., 1988), pp. 1-23.

To even list these problems runs the risk of portraying China as a political, social, and economic powderkeg. A principal danger of viewing China's current situation in overly-apocalyptic terms is that American public and private decision makers will be inhibited from building economic, strategic, and cultural relations out of a misplaced expectation that enduring and mutually beneficial links will be unwise because of a looming deluge.

Such a response would damage American interests, hamper realization of the opportunities that do exist, and further retard economic and political development in China. China's future, whatever it may be, will be built upon the human and material foundation of the present. It is better that we be knowledgeable about, and connected to, that foundation rather than relegate ourselves to the sidelines of the future.

Kenneth Lieberthal, Christopher Clarke, and Robert Sutter all observe that there are both stabilizing and destabilizing factors that must be considered in assessing china's prospects for stability. I agree. Nonetheless, the reader needs a broader understanding of the stabilizing factors and a summary judgement about the net result.

Beyond the four factors cited in the Lieberthal contribution, the single most important stabilizing factor is China's peasantry. This mass is not only still comparatively isolated and comparatively uneducated; more importantly, it has benefitted greatly from the last decade of reform. I see almost no evidence that China's peasants currently are motivated to destabilize things, though we must candidly acknowledge that we know little about the thinking and perceptions of China's rural masses. One needs only to go to lively rural markets, see vast new tracts of peasant housing, and observe the last decade's explosion in rural industry to realize that the peasants have done pretty well by any historic standard with which they are familiar. In perhaps the most poignant discussion I have had with a Chinese intellectual since June 4th, we agreed that "the dreams of China's intellectuals seem not to be the dreams of China's peasants and workers."

This brings us to China's workers, notable participants in the later stages of the Tiananmen demonstrations. While careful field research would be needed to validate this assertion, my observations lead me to believe that the bulk of China's urban workers in state enterprises in some ways prefer the security of a planned economy to the uncertainties which are an essential feature of a reformed market economy. The past four decades of an egalitarian work ethic and industrial featherbedding of enormous proportions have taken their toll. Richard Nixon, in his *In the Arena* [2] notes that a Soviet economic advisor observed that in the Soviet Union "ideology has become psychology." This appears to be the case among state industrial workers in China as well.

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[2] Richard Nixon, *In the Arena* (Simon and Schuster: New York, 1990), p. 320.

The fears of China's state enterprise workers about a market economy and social instability are quite clear when one considers their opposition to the concept of bankruptcy and their role in helping peacefully clear Shanghai's streets of students and others in June 1989. Further, much of the discontent manifested in Tiananmen Square and elsewhere in China during the spring of 1989 was directed against inflation and corruption—almost unavoidable, short-run results of piecemeal economic reform. It seems to me that China's workers are ambivalent. They support reform (in the abstract), they want less corruption, and they want improved living standards. However, at the same time, they are not excited about the prospects of having to work harder in a much less secure economic environment. Conditions would have to deteriorate sharply for them to overcome these ambivalences.

The material circumstances of urban residents is also an important factor in this assessment. Despite a sluggish market and mounting inventories of many goods (especially durable goods), urban markets are well stocked with produce and consumer items. china's major cities are free from the queues and scarcities that have been a permanent feature in Soviet and Eastern European cities. Life may not be great, but it is literally light years ahead of what has catalyzed the breakdown in the soviet Union and fostered disturbances in Central Europe.

Further, if Mao Zedong's successful revolution had one lesson to teach it was that enduring social change requires a disciplined leadership possessing an ideology capable of mobilizing workers, peasants, and intellectuals alike. An inescapable observation about the present is that no such alternative, either ideological or organizational, exists in China today, as Clarke notes in his contribution. There are no meaningful parties, unions, or religious institutions to provide leadership and an alternative vision. Although the People's Liberation Army is playing a bigger domestic role in the wake of June 4th, and while it may prove decisive in the looming succession, there is very little evidence that the military is anywhere near playing a role analogous to that which the Romanian army played in late 1989.

In short, beyond the largely alienated intellectual class, the conditions favoring massive, widespread, disciplined, potent, and sustained social upheaval appear weak. Instead, the principal danger facing China is interminable policy gridlock resulting from elite conflict and uncertainty, autonomous local authorities who resist needed moves, and a populace that itself is unwilling to make the short-term sacrifices that will lead to a better future. As a result, mounting ecological, demographic, and economic problems will not be addressed effectively.

Given this situation, the question for American policy is how we can respond in ways that take full cognizance of these problems and simultaneously promote our values and interests? I fear that it may be too easy to reach the facile conclusion that China is currently too unpredictable, its relevance to core American interests too limited, and our influence too marginal to justify any American policy beyond "wait-and-see" and "benign neglect." In my view, there are some organizing principles that ought to guide our relations with the People's Republic in this difficult period.

1) If Beijing is ever to build a policy consensus and rebuild social legitimacy, it is going to have to recruit key central players from the localities where, in some cases, economic performance has been comparatively good, recent repression comparatively mild, and where leaders may be comparatively unsullied by the disasters of June 1989. This suggests that American public and private sector leaders should vigorously cultivate ties with local leaders throughout China. It also suggests that while the aggregate performance of the Chinese economy may leave much to be desired, there will be regional pockets of high growth where expanding Sino-American economic relationships may make sense. For instance, the economically growing areas of the Yangtze Delta and the area around Canton (Guangzhou) alone represent huge markets and production potentials. In short, China is a large, diverse country, and should not be treated as an undifferentiated whole.

2) If China is going to achieve improved economic performance and greater social stability, it is only going to do so by systematically righting the balance between "state" and "society", by building the institutions of central "macro" economic control while decentralizing enterprise management (beyond the dead hand of local bureaucrats), by persevering with market-managed price reform, by placing even more emphasis on basic (primary and secondary) education, and by sustained and large investment in agriculture. The United States should be willing to help in these basic development efforts, albeit recognizing that our current economic woes may make any substantial bilateral development assistance infeasible. We need to recognize today, as we did in the 1960s, that involvement in the economic development of others promotes our own long-term economic well being.

3) We need to nurture productive relations with Beijing, based on a policy of speaking truth (as we understand it) and cooperating to solve international and bilateral problems, all the while not deluding ourselves about stability within China's elite. China's cooperation on sanctions against Iraq are of critical importance, as is China's recently more helpful approach to the endless bloodshed in Cambodia. Speaking more broadly, it is unlikely that we will be able to address global environmental, health, and weapons and technology transfer issues if we do not maintain workmanlike relations with China's central rulers.

In short, the chapters in this section speak forcefully, consistently, and largely accurately, to the infirmities of China's governing and economic systems. The key issue is, however, How should Americans respond? Rather than benign neglect, we must pursue a policy of nurturing both central and regional relationships; focusing commercial economic links on areas performing well; concentrating government and exchange relationships on basic institutional, educational, and agricultural development; and maintaining constructive, workmanlike ties with Beijing in the solution of common bilateral and global problems.

This is imperative because the one question these articles did not address, and which should be foremost in the minds of policymakers, is: What are both the practical and human consequences (for China, America, Asia, and the world) of widespread disorder, or poor economic and political performance, in the People's Republic of China?

SOME THOUGHTS ON THE CONTEXT FOR ANALYZING CHINA

by Allen S. Whiting *

As Jonathan Spence has so admirably depicted in his superb history, *In Search of Modern China*, the once renowned Middle Kingdom has experienced prolonged political crises repeatedly during the past 150 years. Yet these crises have seldom been resolved as climatically as with the Chinese Communists ascendancy in 1949. More typically they have been screened by a semblance of rule from the center that concealed the actual or incipient localized freedom from central control. Chinese and foreigners alike continued to treat Peking or Nanjing as a symbolic capital from 1912 to 1937. However, its actual writ in terms of coining currency, collecting taxes, and controlling troops only extended over a portion of the vast area uniformly identified as China on the world map. The same flag flew from one extremity to the other but primary allegiance went to local military commanders.

The warlord domination prevailed in the first decades of the twentieth century because of the virtual independence of various generals enjoyed vis-a-vis the central government. Nor did this entirely end with World War II, by which time the Nationalist regime faced a rival Communist government expanding its own power over entire regions while ostensibly allied against Japan. Only with establishment of the People's Republic of China in 1949 did central rule extend throughout the country, excepting Tibet, which was occupied in 1950, and Taiwan, which remained under American protection after June 1950.

As the accompanying essays suggest, there is cause to question the degree to which the Chinese capital controls the country. What might be called "economic warlordism" threatens Beijing's ability to dictate investment and trade policy throughout China. This applies in particular along the coast and in the south where special enclaves and distance offer the opportunity to pursue fiscal practices for local benefit at the cost of the national economy. What Deng Xiaoping has termed "one country, many systems" with respect to the mainland itself.

The implications of this development are far-reaching. Most immediately, resource allocation will be determined regionally with the exchange of goods, services, and even capital occurring among provinces, counties, and municipalities without Beijing's direction or in some cases its prior knowledge. Foreign entrepreneurs will build on local relationships rather than work through the slow grinding ministerial machinery in Beijing. Not only will the regime lose control over financial and human resources but its vaunted planning capacity will be seriously eroded except for selected industries and their associated infrastructure.

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Over time this erosion of central economic authorities will be exacerbated by two political dilemmas, the recurring problem of leadership succession and the associated but separate ideological crisis. Both issues deserve special attention as threatening the continuation of Communist rule in China. So long as power is personalized rather than institutionalized, the leader's role is critical to exercising authority. This not only places a premium on his ability, it also places a premium on the ability of his cohorts and subordinates who collectively exercise his will as a personal network.

Mao Zedong tolerated, if he did not initiate, the purge of virtually all but a handful of his able associates who had won a civil war and established the first truly national government since the collapse of the Qing dynasty. Mao's chosen successor, Hua Guofeng, could not fill the Chairman's shoes but Deng was able to restore leadership and recruit both new and old associates in a rejuvenated regime. However, Deng failed to keep his chosen successors in place long enough to take over on his death, leaving the likelihood of a power struggle among a host of lesser lights with no visible star in the ascendancy.

The absence of an effective leader becomes particularly serious in an ideological vacuum that leaves no guidelines for behavior with no clear differentiation between right and wrong. The thorough discrediting of Marxism-Leninism-Mao Zedong Thought, especially for the younger generation, was perhaps inevitable, given the incredible human costs of the Cultural Revolution and the necessary rehabilitation of its more prominent victims. But Deng's failure to come up with more than catch-phrases left a society of 1.1 billion people living largely a marginal economic existence with no values or goals other than personal and familial enrichment. The resulting corruption, cynicism, and alienation combined with growing inflation to produce rising resentment against the regime. The Tienanmin Square demonstrations in the Spring of 1989 provided one brief outlet for this resentment. Its forcible suppression restored order but did not establish legitimacy for the regime or assure loyalty among the people, especially in urban areas.

Patriotism or muted xenophobia proved insufficient in the aftermath of June 1989. The leadership's recourse to various well-worn themes failed to mobilize a credible response at home while arousing concern abroad. By mid-1990 the campaign had significantly ebbed in national media, although it had not wholly disappeared in party and military journals. In its place came strong negative themes against pornography and corruption but no positive themes capable of mobilizing energies and evoking sacrifices for the sake of national objectives.

These three factors—economic warlordism, leadership succession crisis, and ideological vacuum—do not necessarily lead to an open collapse of a regime, much less to revolution. China's size and the ability of many sectors to run along on their own power mitigate against the dramatic and sudden changes that racked East Europe in 1989. Furthermore, as the accompanying essays suggest, a population that fears chaos, with good reason, must be pushed to extremes before it will explode. Last, but not least, the People's Liberation Army is unlikely to countenance civil strife, much less break apart in civil war. It remains an effective instrument of national control, perhaps the only one left to the regime.

But if the most probable scenario is a far less dramatic one than that of East Europe or even of the Soviet Union, it is nonetheless challenging to an aspiring post-Deng leadership in Beijing and sobering for all who must deal with the world's largest population. Aside from the various conflicting claims of territorial sovereignty on land and sea that confront most of China's neighbors, non-Han peoples on China's periphery can challenge Beijing's rule with potential spillover effects in India, the Soviet Union, and Mongolia. A different kind of spillover could follow natural disasters, such as several bad years of weather that sharply reduce the food supply so as to trigger mass migration across borders such as that which occurred in 1962. Moreover the problems of pollution, health, environment, and other global issues that require international management cannot be effectively addressed by a rump regime that lacks national authority.

In short, China's dilemma present problems for the world at large. Their resolution, however, depends on the Chinese themselves. Past assumptions of foreign fixes, whether missionary or monetary, do not apply. The crisis is sufficiently deep and longstanding to confront the regime with its own demise unless it manifests dramatic change in political and economic reform while mobilizing the Chinese people in a national ethos that can elicit the response necessary to endure the difficulties and sacrifices that lie ahead. Such an ethos exemplified the first decade of the People's Republic. Whether it can return in the fifth decade remains to be seen.

II. REFORMS

OVERVIEW

By George D. Holliday *

The Chinese leadership's policy of economic retrenchment, initiated in the summer of 1988 and intensified after the Tiananmen Incident a year later, has dealt serious blows to Chinese reformers who had advocated market-oriented economic reforms. The conservative regime has reinstituted some central controls, undermined some of the promising reforms of the 1978–1988 period, and put strict limits on the kinds of reforms that Chinese economists can openly debate.

Does the economic retrenchment of the current regime mark the end of market-oriented economic reforms in China? The authors who contributed to this section do not think so. They emphasize that some of the reforms remain in place and that other reforms are likely to emerge in the coming decade, especially after the aging members of the current regime yield to a new generation of Chinese leaders. Most, however, emphasize that China is unlikely to adopt a market economy "without adjectives," as advocated by the more radical economists in other formerly centrally planned economies in Central and Eastern Europe. Indeed, most of the authors think that China is destined to develop an economic system modified by several adjectives: they variously suggest that China will have a "regulated market economy," a "planned commodity economy," a "more conservative model of a reformed Soviet-economy," an "updated central administrative command system," or a "mixed system."Nevertheless, optimists and pessimists alike foresee a future Chinese economic system that differs significantly from the centrally planned system of China's recent past. Most have a somewhat ambivalent outlook for economic reform in China: they are discouraged by many factors in the current environment that inhibit further reform, but are encouraged by factors that are likely to facilitate reforms in the future.

FACTORS THAT INHIBIT ECONOMIC REFORM

Chinese reformers face formidable economic and political impediments. On the political front, they are opposed by conservative forces in the leadership and by broader segments of the population

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Papers not mentioned in this overview were not available to the reviewer at the time this was drafted.

that stand to lose if economic reforms lead to a redistribution of income. On the economic front, the reformers face a negative appraisal, at least among some elements of Chinese society, of the effects of reforms already in place. They must also overcome uncertainty and disagreement among economists over the best way to proceed with economic reform.

Perhaps the most difficult barrier to overcome in the short run is the political outlook of the leadership. An essential feature of past economic reforms, as Harry Harding points out, was the removal of the Party from microeconomic decisionmaking. Resistance by much of the Party leadership to the loss of control over the economy explains much of the retrenchment since 1988. Harding and others describe a progressive reintroduction of Party controls in domestic enterprises, foreign ventures, and government agencies responsible for economic policy. Thus, one precondition to a resumption of the reform movement appears to be a change in attitude of the current leaders or a change in leadership. Robert Dernberger maintains, however, that the current leaders lack the political will to move toward a true market-socialist economic system. He suggests that they are unlikely to accept even less dramatic reforms to introduce greater efficiencies into the current system.

In the long run, the attitudes of broader segments of Chinese society are likely to determine the direction of Chinese economic policy. Dernberger and others suggest that many Chinese harbor deep suspicions of the market. One reason for their suspicions is that the past reforms redistributed income among various elements of the population. Albert Keidel and Barry Naughton describe, for example, dramatic changes in the structure of relative prices which accompanied the reforms. Since government subsidies and controls distort prices in the centrally planned economy, movement toward market prices creates winners and losers among the population. Increases in food prices relative to other consumer goods, a dominant feature of recent price reforms, threatened the standard of living of urban workers. Keidel concludes that the government's inability to finance the large subsidies needed to maintain urban living standards is a major obstacle to price reform.

Complicating the plight of Chinese economic reformers is the distribution of the benefits and costs of the reforms over time. Harding notes that the economic reforms of late 1970s and early 1980s provided quick economic returns to key economic groups, including peasants and some workers. While such gains generated short-term support, the benefits later began to level off. When the costs of the reforms—inflation, inequality, and corruption—became apparent, many Chinese became disillusioned and rebelled. Even if Chinese leaders were inclined to push further reforms, Harding thinks that they may not have widespread popular support.

Indeed, the Chinese appraisal of the costs and benefits of past economic reforms may differ significantly from that of Westerners accustomed to living in a market economy. Dernberger notes that, while the reform-generated instabilities in real incomes, employment, prices, the balance of payments, and the budget might not seem great to those who have lived in a free market economy, they appear "quite alarming" to those who have lived in a Soviet-type economy. Moreover, Dernberger, Harding, and Naughton note that the retrenchment has succeeded, albeit with significant costs, in moderating the degree of instability experienced in the decade of reform. Most notably, the Chinese government succeeded in ending the hyperinflation of 1988 by reinstituting direct administrative controls and renewing some subsidies. Many Chinese may believe, therefore, that central controls are needed to ensure a stable economic growth.

FACTORS THAT FACILITATE ECONOMIC REFORMS

Despite an imposing array of impediments to reform, the contributors to this section are not totally pessimistic about the prospects for economic reform in China. They point out that elements of the reforms are still in place and appear to enjoy broad support. They also note that some segments of Chinese society have benefitted from past reforms and have a vested interest in maintaining and deepening the reform movement. Moreover, most of the contributors think that further reform is needed to solve China's economic problems: they emphasize the inability of the government to redress such problems with current policies and institutions.

Although the current leadership has clearly pursued a policy of retrenchment since 1988, it has not dismantled all of the reforms of the previous decade. Harding, while acknowledging that the steps taken in the last two years do constitute a "retrogression," points out that China has not resumed rigid central planning, reinstated collective agriculture, or significantly reduced the role of the nonstate sectors of the economy. Some of the retrenchment measures, he says, are macroeconomic policies that are consistent with a program of structural reform, and others are purportedly temporary measures. Similarly, Penelope Prime describes a significant reform of China's tax system which, if fully implemented, can raise needed government revenue without subjecting enterprises to direct government control. She sees reason for optimism because the reformed tax system, though partially undermined by retrenchment measures, is still in place. The continuation of some elements of the tax reform program suggests that at least some members of the leadership still support economic reform.

The redistribution of income associated with price liberalization has undoubtedly created economic winners as well as losers. Consequently, some groups in China are likely to support the reform movement. Jan Prybyla maintains that the decade of the 1980s has demonstrated that there is strong sentiment in favor of market reform among Chinese intellectuals. He also notes mounting material frustrations of urban workers and peasants, suggesting that they are potentially strong supporters of economic reform.

David Denny suggests another reason why the reforms may have wide popular support. Acknowledging that the reforms may have widened differences in income among classes of people, he demonstrates that the reform period was accompanied by a narrowing of economic disparities that had previously separated rich and poor provinces. Denny finds that all of the provinces achieved substantial growth, largely due to "the return of more natural economic patterns that offset the extremely irrational and self-defeating patterns that characterized China's regional economic policies in the previous two decades." (According to Denny, central government policies, which reallocated budget resources and influenced the location of foreign investment in China, may also have contributed to more equal growth rates among the provinces.) An implication of Denny's findings is that the reforms may have broad geographical support in China, or, at least, have not exacerbated regional conflicts over economic policy.

Most of the authors suggest that an important rationale for further Chinese economic reforms is the apparent inability of the current system to solve fundamental economic problems. Dwight Perkins and Jan Prybyla, for example, note that the problems of the old centrally planned system—excess demand, inflation, and inefficiency—persist. Solution of such problems, they maintain, requires additional economic reforms.

STRATEGY FOR ECONOMIC REFORM

Harding finds that past reform efforts have suffered from the lack of an effective strategy for reform. While the contributors to this section agree that the Chinese government is unlikely to redress its economic problems under the current system, they differ on the likely or desirable strategy of future Chinese economic reforms.

A key issue is how to avoid inflation during price reforms. Harding believes that China's recent experience with inflation was the predictable result of the government's strategy of microeconomic reform and macroeconomic policies. The government allowed greater financial autonomy to provinces and enterprises, without subjecting them to hard budget constraints. At the same time, the government followed fiscal and monetary policies to increase supply through faster growth rather than to limit demand. Harding suggests that Chinese policymakers have learned the lesson that price reform will be highly inflationary unless it is conducted during a period of relative equilibrium between supply and demand. Keidel, on the other hand, maintains that inflationary periods can facilitate price reform because adjustment of relative prices can take place more easily when all prices are rising.

Perhaps a more fundamental issue is whether to introduce market-oriented reforms quickly and comprehensively or to reform more gradually, maintaining some elements of a socialist system. Prybyla stresses the need for comprehensive "shock" therapy. In the current system, he maintains, the institutional preconditions for applying market remedies do not exist, and the old administrative remedies no longer work. He concludes that the only way to reform the current system is to transform it into a market system. He suggests that the Chinese will reach the same conclusion in the 1990s.

Prime's discussion of the Chinese experience with tax reform also suggests the importance of implementing reforms on a broad front. The tax reform, designed to provide positive incentives for enterprises, is being diluted by failure to implement other reforms. For example, enterprises currently have incentives to reduce the amount of income subject to taxes. They report losses with little threat of bankruptcies and sometimes with expectations of increasing government subsidies. Moreover, because some prices are fixed by the government, enterprise profits may not reflect increases in efficiency and productivity. An implication of Prime's discussion is that useful reforms may be thwarted if they are not complemented by reforms in other parts of the economy.

Perkins and Naughton, on the other hand, maintain that the Chinese government could improve the performance of the economy without a complete transformation of the system. Perkins suggests possible ways of breaking ties between the government and enterprises within a socialist system. An independent banking system which imposes hard budget constraints on enterprises, new forms of public ownership, and retraining of central planners, he says, could help alleviate chronic problems in the economy. Similarly, Naughton believes that there is nothing inherent in the Chinese economic system that would prevent significant reforms, such as creation of an independent central bank, progressive decontrol of prices, and enterprise reform.

Whichever strategy the Chinese adopt, and whichever adjectives are appropriate to describe the future economic system, continued reforms appear likely. The rationales for reform—promoting stable economic growth and improving the efficiency of the economy—remain compelling. The experience of recent years suggests, however, that the reforms may proceed more slowly and take a more circuitous route than many Chinese prefer.

THE PROBLEMATIC FUTURE OF CHINA'S ECONOMIC REFORMS

By Harry Harding *

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I. INTRODUCTION

Ever since the Tiananmen Incident of June 1989, Chinese leaders have been attempting to assure foreigners of their continuing commitment to economic reform. As early as five days after the massacre, Deng Xiaoping informed a meeting of military officers that the policies of economic reform and opening to the outside world would continue despite the political turmoil of the preceding months.[1] The Fourth Plenum of the Central Committee, meeting two weeks later on June 23–24, likewise declared that the policies of the 13th Party Congress, including those concerning economic reform, would be sustained.[2] The Fifth Plenum, which met in November 1989, issued similar reassurances.[3] In virtually every meeting with foreign visitors, top Chinese officials, including Jiang Zemin and Li Peng, have reiterated that China remains committed to the transformation of the country's economic system and to extensive interaction with the international economy.

Despite these reassurances, many foreign observers still have doubts about the prospects for economic reform in China. In a cover story in March 1990 on the situation in China, *U.S. News and World Report* asked whether "reform, in the sense of further movement toward a free-market system, had had its day."[4] In the academic community, most scholars of Chinese politics and economics are now more pessimistic about the fate of economic reform than they were in 1987 or 1988. And the most recent annual report on the Chinese economy prepared for the American Congress by the Central Intelligence Agency has also concluded that there is little chance for a "return in the near term to comprehensive, market-oriented reform."[5]

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[1] Radio Beijing, June 27, 1989, in *Foreign Broadcast Information Service Daily Report: China* [hereafter cited as *FBIS*], June 27, 1989, pp. 8–10.

[2] Radio Beijing, June 24, 1989, in *FBIS*, June 26, 1989, pp. 15–16.

[3] Xinhua News Agency [hereafter cited as Xinhua], November 9, 1989, in *FBIS*, November 9, 1989, pp. 19–22.

[4] *U.S. News and World Report*, March 12, 1990, p. 44.

This paper attempts to explain why, despite repeated reassurances by Chinese leaders, the future of China's economic reform now appears so problematic to foreign observers. It is organized around five critical issues facing China's efforts at economic restructuring, each of which raises some important doubts about the fate of economic restructuring in China. These five problems include:

- the uncertain prospects for China's economic retrenchment program
- the damage that the austerity program has inflicted on economic reform
- the wavering commitment of China's leaders to thoroughgoing economic transformation
- the need for a more effective strategy of economic reform in the future
- the flagging support for economic reform among key sectors of Chinese society

Only if subsequent events in China begin to remove their reservations on all five issues will foreign observers begin to view the future of China's economic reform program less pessimistically than is now the case.

II. THE UNCERTAIN PROSPECTS FOR ECONOMIC RETRENCHMENT

In the late summer of 1988, Chinese leaders announced a program of economic retrenchment, aimed at ameliorating the economic and political damage that excessive rates of growth had inflicted on the country's reform effort.[6] Overly rapid economic growth had produced severe bottlenecks, particularly in raw materials, energy, and transportation. It had also contributed to China's international balance of payments deficit, both by stimulating the country's imports and by holding back the nation's exports. And the overheated economy had been one of the major causes of inflation, which in turn was perhaps the most important factor behind the deepening crisis of confidence in economic reform that plagued Chinese politics throughout the late 1980s.

This economic retrenchment effort, which was intensified after the Tiananmen Incident of June 1989, achieved notable results by the end of the year. The rate of inflation, on a monthly basis, dropped to an annual rate of around 7%—well below the government's target of 10%. Industrial growth rates fell, whereas agricultural production remained strong. The excessive growth in the money supply and in bank credits was halted. China's trade deficit fell from around $7.7 billion in 1988 to $6.6 billion in 1989, and the country scored a small surplus in the first quarter of 1990.

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[5] "The Chinese Economy in 1989 and 1990: Trying to Revive Growth While Maintaining Social Stability" (Washington, DC: Directorate of Intelligence, Central Intelligence Agency, June 1990), p. 2.

[6] Xinhua, August 18, 1988, in *FBIS*, August 18, 1988, pp. 16–17.

But the costs of retrenchment were also high. Tighter controls on wages and bonuses meant that, for many workers, real incomes continued to fall despite the reduction in inflation. Unemployment rose rapidly in most major cities, to the highest levels since the early 1980s. Many collective and private enterprises went bankrupt, and the losses incurred by state enterprises mounted. Many firms, including foreign ventures, reported their inability to receive payments from customers who owed them money. Provincial authorities complained bitterly about the tight restrictions on credit.

As a result, in late 1989 the central government decided to relax its retrenchment policies so as to avoid a "hard landing." To stimulate the urban economy, wages and bonuses were raised sharply at the end of the year, and both the central and provincial governments channeled more money into capital construction. In the countryside, agricultural credits were increased, so that peasants would be paid for their harvest in cash rather than in the IOU's they had received at the end of 1988. Subsequent reports in early 1990 revealed that more loans were being made available to money-losing establishments, so as to stem the wave of bankruptcies and to ensure that enterprises in the red could still remit taxes to the central government.[7]

Given the lags between adjustments in central government policy and changes in economic performance, and between changes in economic activity and their reflection in published statistics, the net effect of this relaxation remains uncertain. As of the end of March 1990, Chinese leaders appeared to have halted the declines in industrial production, retail sales, and urban employment that had bedeviled the economy at the turn of the year, without restoring high rates of inflation. But there was little confidence among either Chinese planners or Western economists that the nation's economic equilibrium had been fully or permanently restored. Some analysts suggested that the relaxation of credit had not been sufficient to avoid a protracted recession, whereas others foresaw a resurgence of inflation as a result of the growth of wages, credit, and government spending.

These changes in economic policy at the turn of the year are symptomatic of a deeper, long-term issue: whether Chinese leaders can sustain the moderate rates of economic growth and inflation that would be most conducive to further economic reform. The pattern of economic growth in China since 1978 leaves little doubt that the central government can still slow down or speed up the economy, despite the decentralization of economic management over the past decade. What is less clear is whether these central controls, and the leaders employing them, are sophisticated enough to prevent an alternation between severe recession and excessive growth.

Neither of these outcomes is conducive to further economic reform. Recession will complicate the restructuring of urban enterprises by reducing the profitability of industrial and commercial establishments, while simultaneously limiting the prospects of alternative employment for those workers laid off from overstaffed or failing firms. Conversely, an overheated economy complicates price reform by increasing the chances of severe inflation when administrative price controls are relaxed. Only if China can avoid the "boom-bust" cycles of the past can it improve the prospects for further economic restructuring.

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[7] *Far Eastern Economic Review*, April 5, 1990, pp. 38–39.

III. THE DAMAGE INFLICTED ON ECONOMIC REFORM

To a degree, the economic retrenchment begun in 1988 has been undertaken by macro-economic measures fully in keeping with a program of structural reform. Tightening credit by raising interest rates and reducing the money supply, for example, is a strategy for controlling inflation that does not contradict a long-term commitment to economic restructuring. Cutbacks in government spending for capital construction are also an example of the use of fiscal policy in ways familiar to all market economies.

But in other areas, retrenchment has involved a reversal of course, away from liberalization and back toward government intervention in the economy. One such area has been the reassertion of administrative controls over a wide range of economic activities.[8] Examples include the tightening of price controls over goods in short supply, the reinstitution of mandatory state allocation for critical commodities, the reimposition of government licensing for both imports and exports, the restriction of local autonomy over foreign trade and investment, the use of administrative measures to allocate credit, and the return to government assignment of jobs to college graduates. In some instances, these steps reflect simply the recentralization of decision-making power within the state bureaucracy. But in other cases, the economic retrenchment program has involved renewed government intervention in areas that had previously been decontrolled.

A second area of concern is the renewed involvement of Party committees in the management of both domestic enterprises and foreign ventures, and the reestablishment of Party committees in various government agencies. In China, as in any political system, the ruling party will inevitably be involved in shaping broad macro-economic policy. But one important facet of economic and political reform in China had been to remove from the Party the responsibility for micro-economic decisions. The reintroduction of the Party at the agency and enterprise levels therefore appears to contradict a major premise of both economic and political reform.

Finally, some economic retrenchment measures appear to have been selectively implemented in ways that do greater damage to the private and collective sectors of the economy than to the state sector. Credit controls, for example, have apparently been applied more strictly to township and village enterprises than to state enterprises. Conversely, the recent relaxation of austerity measures seem to be targeted specifically at state-owned factories in high priority sectors of the economy. One measure of the effects of this policy bias is that employment dropped more precipitously in the collective sector than in state enterprises during the economic slowdown of early 1990.

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[8] Some of these measures are summarized in the report on economic policy adopted by the Fifth Plenum in November. For the text, see Xinhua, January 16, 1990, in *FBIS*, January 18, 1990, pp. 24-37.

To be sure, the net effect of these three sets of adjustments should not be exaggerated. China has not reinstated rigid central planning, reinstated collective agriculture, or significantly reduced the role of the non-state sectors in industry and commerce. Moreover, Chinese planners insist that some of these measures are only temporary expedients to deal with the severe economic problems of the late 1980s. Still, taken together, these steps do constitute a retrogression in the reform effort. It will therefore be necessary to reintroduce some of these reforms later simply to recreate the structure of the Chinese economy that existed before the Tiananmen Incident.

IV. WAVERING COMMITMENT TO THOROUGHGOING ECONOMIC REFORM

A third obstacle to thoroughgoing economic reform is that the present Chinese leadership does not have the same vision of economic restructuring as it did before the Tiananmen Incident of June 1989. As noted above, Chinese leaders still insist that they are committed to a program of "reform" and "opening." But they now seem to define these two terms quite differently than they did in the late 1980s.

For example, a wave of articles in the Chinese press in the summer of 1989 criticized some of the basic assumptions underlying fundamental economic reform. There was a sustained attack on thoroughgoing marketization of the economy, as well as even sharper denunciations of thoroughgoing privatization. Conversely, the official mass media vigorously defended key institutions and mechanisms associated with the previous economic system, with some articles extolling the role of mandatory plans, others insisting on the primacy of public ownership, and still others proposing a return to collectivized agriculture.[9] Although Chinese leaders have insisted that the program of the 13th Party Congress remains in effect, one of the key passages of the report to that congress—"the state regulates the market, and the market guides the enterprise"—is no longer featured prominently in published discussions of economic reform, presumably because it implied the desirability of a regulated market economy within minimal mandatory planning.

Some of the institutions and individuals which had spearheaded the economic reform effort in the 1980s have also been the victims of the tightening of political controls following the Tiananmen Incident. Both the Party's Rural Development Research Center and the government's Institute for Economic System Reform (*tigaisuo*) have been disbanded, with their staff transferred to other organizations. The Shanghai *World Economic Herald* (*Shijie jingji daobao*), one of the most reform-minded publications in China, has ceased publication. Private "think tanks" pursuing interesting work on the economy, including the Stone Company's Institute for Social Development Research, the Institute of Social and Economic Science, and the CITIC Research Institute, now appear to be inactive. Many reformers are currently living abroad, and others who remain in China do not seem to be publishing actively in the Chinese press. As a result of these developments, the climate for the discussion of China's economic reform program is not as lively and open as it was before June 1989.

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[9] For typical defenses of mandatory planning during this period, see *Guangming Ribao*, October 7, 1989, p. 3, in *FBIS*, November 1, 1989, pp. 37-39 and 39-41. For characteristic criticisms of privatization, see *Jingji Ribao*, July 4, 1989, p. 4, in *FBIS*, July 21, 1989, pp. 28-31; and *Guangming Ribao*, September 9, 1989, p. 3, in *FBIS*, October 16, 1989, pp. 35-37.

To be sure, Chinese leaders have become increasingly specific in their commitment to sustained economic reform. Last summer, Chinese officials spoke in only the vaguest terms about the continuation of a policy of "reform and opening." Beginning in November, however, leaders began to identify a more specific list of "socialist reforms" that would be continued and deepened.[10] These include the various responsibility systems in finance, agriculture, and industry; the foreign trade contract system, the special economic zones, and the coastal development strategy; the reform of the banking, housing, and welfare systems; and the encouragement of a degree of individual and private enterprise. Some administrative price adjustments, involving energy, transportation, and foreign exchange, have also been enacted since June 1989.

Still, the vision of economic reform now held by Chinese leaders is significantly different than it appeared to be in the late 1980s. Then, the ultimate objective seemed to be to create a regulated market economy, with little if any mandatory planning, with producers responsible to the market for their profits and losses, with hard budget constraints on enterprises, and with extensive markets for the factors of production as well as for final production. Now, the goal seems to be more modest. Chinese leaders and economists speak today of a "planned commodity economy," with considerable mandatory planning, with producers responsible to the state for fulfillment of various contracts, with subsidies for enterprises that incur losses, and with markets limited to the allocation of secondary commodities. In short, Chinese leaders now seem to envisage a smaller and more restrictive "bird cage" for their nation's economy than they did in 1987 and 1988.

V. THE NEED FOR A MORE EFFECTIVE STRATEGY OF ECONOMIC REFORM

Even if future Chinese leaders should recommit themselves to the goal of a regulated market economy, they will still need to develop an effective and sustainable strategy for creating one. Simply reviving the reform strategies of the 1980s will not be sufficient. Indeed, such a decision could well doom a second round of reform to failure.

By the late 1980s, economic reform in China had begun to experience serious difficulties. Although the country continued to enjoy high rates of growth in both domestic production and foreign trade, it was increasingly plagued by such problems as inflation, inequality, and corruption. Moreover, several key indices of the country's macro-economic health were severely out of balance. The government deficit continued to grow, with sluggish revenues unable to keep pace with soaring deficits. The current account deficit also began to burgeon, with an overheated economy drawing in imports and holding back exports. From a sectoral perspective, the economy was out of balance, with vibrant processing, construction, and consumer goods industries increasingly frustrated by bottlenecks in raw materials, energy, and transportation.

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[10] For lists of reforms to be kept in place, see the Fifth Plenum's decision on economic policy, carried in Xinhua, January 16, 1990, in *FBIS*, January 18, 1990, pp. 24-37; and a statement by Li Peng, in Xinhua, December 12, 1989, in *FBIS*, December 13, 1989, p. 9. A list of the reform experiments to be continued appears in Xinhua, January 8, 1990, in *FBIS*, January 9, 1990, pp. 23-24.

In retrospect, it is clear that many of these problems were due to the strategies of reform that Chinese leaders had selected in the decade after the Third Plenum of 1978. Inflation was the predictable result of a decision to grant greater financial autonomy to provinces and enterprises, without simultaneously subjecting them to hard budget constraints. It was then exacerbated by a further decision to address the imbalance between supply and demand by attempting to increase supply through faster economic growth, rather than by decreasing demand. Corruption was the consequence of creating a dual-price system, and then permitting the gap between administered prices and market prices steadily to widen. Allowing individual entrepreneurs and collective enterprises to seek and retain profit, without a rational system of prices and an effective system of taxation, resulted in growing imbalances and inequities among various economic and social sectors. And the failure to impose either stringent financial discipline or adequate tax obligations on industrial enterprises was responsible for imbalance between government revenues and expenditures.

The issue now is whether Chinese reformers have conducted a serious evaluation of the successes and failures of reform over the last decade, and have devised a new strategy for conducting the next round of economic restructuring. The decision on economic policy adopted at the Fifth Plenum last November suggests that two such lessons have been identified: first, that price reform will be highly inflationary (and thus politically intolerable) unless it is conducted during a period of relative equilibrium between supply and demand; and second, that price reform will generate serious corruption unless the gap between administered prices and market prices is steadily narrowed.[11]

But there is less evidence that other, equally important questions, have yet been addressed. One set of issues concerns the *preconditions* for successful economic reform. For example, is it necessary, at an early stage, to impose hard budget constraints on both state enterprises and local governments? Do hard budget constraints, in turn, require a fundamental change in the system of ownership in industry, or at least a transformation of the system of accountability for factory managers? Is it necessary to break down protectionist barriers between provinces, so that provincial enterprises are not given effective monopolies? Can this be done without a great expansion of China's transportation and communications system? Can a system of planning and market exist for the same commodity without severe dislocations?

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[11] Xinhua, January 16, 1990, in *FBIS*, January 18, 1990, pp. 24–37.

Another set of critical issues concerns the *strategy* for economic reform. In retrospect, was it wise to attempt to undertake reform in a gradual and incremental manner? Would it be preferable to attempt thoroughgoing reform all at once, by eliminating price controls and enterprise subsidies at one stroke, as has apparently been attempted in both Vietnam and Poland? If an incremental strategy is still deemed to be most effective, what is the most appropriate sequencing of reform measures? Should price reform precede enterprise reform, or *vice versa*? Or should they both be conducted gradually, but in tandem? And, perhaps most generally, how should the costs and benefits of reform be distributed over time? Should the benefits precede the costs, or should the benefits and costs be imposed simultaneously?

Over the next several years, it will be imperative for Chinese leaders to address these questions and to formulate a new and more effective strategy of reform. If they can do so, there is a better chance that, once it resumes, urban economic reform will be more successful in the 1990s than it was in the 1980s. If these issues are not resolved, however, there remains the disturbing possibility that renewed reform will simply encounter the same problems and contradictions in the second round as it did in the first.

FLAGGING POLITICAL SUPPORT FOR FURTHER ECONOMIC REFORM

The misjudgments in reform strategy outlined above had political, as well as economic, consequences. Whether consciously or not, Chinese leaders adopted a strategy of economic reform in the late 1970s and early 1980s that provided quick economic returns to key economic groups, including both peasants (through higher procurement prices and the household responsibility system) and workers (through higher wages and bonuses and the greater availability of consumer goods). This strategy may have garnered support for economic restructuring in the short-run, but it may also have generated expectations that reform would be a smooth and easy process. When, in the late 1980s, the costs of reform started to rise, while the benefits began to level off, the popular reaction was not a readiness to sacrifice, but rather disappointment and disillusionment. The huge protests which swept through Peking and other major cities beginning in mid-April, 1989, were caused in large part by widespread resentment at inflation, inequality, and corruption, and by equally prevalent doubts that the government could address them effectively.

Given the severity of the crisis, it is no longer clear that the Chinese political system can still generate enough support for a renewal of economic reform. We have already noted the pressures to abort the austerity program, and to reinflate the economy. But even if the retrenchment effort is successful, politically painful choices lie ahead. Each of the principal elements in the uncompleted agenda of economic reform—price reform, enterprise reform, and financial reform—will challenge the interests of powerful groups in Chinese society.

As noted above, the inflationary consequences of price reform could be reduced if it were undertaken in a less overheated economic environment, and if enterprises were subjected to competitive pressures that would limit price increases. Even so, given the fact that prices for many key goods and services have been kept artificially low for so long, price reform will inevitably produce some inflationary effects. And the goods and services in question—staple foods, housing, transportation, and utilities—are among the most politically sensitive in any economy. Unless productivity continues to rise, further price reform may yet lead to further decreases in real wages, thus contributing to further popular resentment at the costs of economic reform. Such resentment will be focused, of course, primarily among those sectors of society whose incomes tend to rise more slowly, including officials and intellectuals.

Enterprise reform will also strike hard at vested interests. No matter what form it takes—stockification, privatization, or simply hard budget constraints—the goal of enterprise reform will be the same: to make enterprises responsible for their own profits and losses, so as to reduce state subsidies and increase tax revenues. And yet, as Janos Kornai first pointed out, many powerful sectors of society have a vital interest in resisting hard budget constraints. Workers and managers alike fear the unemployment that would accompany bankruptcy. Workers prefer a loose connection between wages and productivity. And local officials, concerned with maintaining labor peace and maximizing local output, can also be expected to oppose the imposition of tighter financial discipline on local enterprises.

Financial reform—in the sense now of increasing the central government's share of national income—will also be unpopular at the provincial level. Chinese leaders themselves have acknowledged the resistance by provincial officials to a redistribution of state revenues, and have called on them to subordinate their local interests to those of the nation as a whole. Tax reform, to the extent that it means more vigorous collection of taxes from both private, collective, and state enterprises, will be as unwelcome in China as it is in other countries.

In short, now that the benefits of economic reform have largely been distributed, what remains are the costs. Faced with this dilemma, some Chinese intellectuals have proposed the creation of a "neo-authoritarian" political system, so as to impose unpopular but necessary reforms on a reluctant society and a resistant bureaucracy.[12] And yet, it would now appear that large sectors of society want a political system that is more democratic, rather than one that is more authoritarian. For this reason, too, there is reason to wonder whether China today has the political ability to renew and sustain the economic reform program.

This dilemma will be particularly intense if, as is possible, a relatively unreformed economic system can be made to perform reasonably well. If, for example, China can sustain moderate growth rates without significant levels of inflation, corruption, and inequality, there may be a willingness to accept the present economic system as it is. The opportunity cost of this decision—slower growth and less efficiency over the longer term—may appear lower than the price of pushing ahead with necessary but painful reforms. As one Chinese intellectual has pointed out privately, a growth rate of 3% per year could be the greatest threat to renewed reform, in that it would greatly reduce the demands for further economic restructuring. Or, to reverse Voltaire's famous aphorism, the good may in this case be the enemy of the best.

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[12] Articles by major participants in the debate over neo-authoritarianism can be found in *Shijie jingji daobao*, January 16, 1989, p. 12, in *FBIS*, February 1, 1989, pp. 33–35; *Shijie jingji daobao*, February 6, 1989, p. 14, in *FBIS*, February 24, 1989, pp. 18–19; and *Jingjixue zhoubao*, March 5, 1989, in *FBIS*, March 17, 1989, pp. 16–18. For reviews of the debate, see *Jingji cankao*, March 7, 1990, p. 4, in *FBIS*, March 23, 1989, pp. 26–47; and *Shijie jingji daobao*, March 13, 1989, p. 10, in *FBIS*, March 29, 1989, pp. 39–42.

VII. Conclusion

The future of Peking's ambitious economic reform program—what Deng Xiaoping once termed China's "second revolution" under the Chinese Communist Party[13]—is one of the most critical factors influencing the future of China's economy and its role in the world. Over the long run, China's economic productivity, rate of growth, and standards of living will be determined by the fate of its economic reforms. China's ability to produce more sophisticated goods for foreign markets, to attract foreign investment to Chinese shores, and to absorb advanced foreign technology will also be shaped in large measure by the outcomes of economic restructuring.

But this essay has suggested five reasons why the fate of China's economic reform program is in doubt. The most immediate issues are the retreat from economic reform that has occurred since the fall of 1988, and the uncertain prospects for the nation's economic retrenchment program. Even if these setbacks prove temporary, however, reform may face additional barriers that are even more serious. It is not clear whether China's present leaders are still committed to a program of thoroughgoing economic reform, whether economists and planners have developed a more effective strategy of economic restructuring than was implemented in the 1980s, and whether there is a sufficient political base for a resumption of reform. Either separately or in combination, these obstacles could significantly reduce the prospects for a revival of economic reform in the years ahead.

These considerations suggest several possibilities for the future of economic restructuring in China. The most pessimistic is that Chinese leaders do not vigorously pursue further economic reform, either because they no longer accept the desirability of a thoroughgoing reform of the price system and the pattern of ownership, or because they are unable to produce the economic and political preconditions for another round of restructuring. In this first scenario, China would not revert to the kind of central planning characteristic of the 1950s, but would continue to have a high degree of government administrative intervention in the economy, a substantial amount of public ownership, significant levels of government protection and subsidies for state industry, and, as a consequence, relatively low levels of growth and productivity. While facing no immediate crisis under this scenario, the Chinese economy could, over the long term, slip into the kind of economic stagnation characteristic of the Soviet Union and much of Eastern Europe in the 1980s.

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[13] Xinhua, March 28, 1985, in *FBIS*, March 28, 1985, pp. D1-2.

In a second scenario, the Chinese government does attempt another round of economic reform, whether in the last years of Deng Xiaoping's life or under a new leadership that emerges after his death. But this second effort at reform once again faces serious obstacles, partly because its architects have not developed a more successful strategy of economic restructuring, and partly because the reform program therefore loses much of its political support. The crisis encountered by economic reform under this scenario need not be as dramatic as the one that unfolded in Tiananmen Square in 1989, nor need the retreat from reform proceed any farther than in 1989–90. But under this scenario there would again be retrogression away from a regulated market economy in the direction of more extensive government interference in economic activity, with the same general results for economic performance as in the second scenario.

Finally, the last scenario would envisage a successful renewal of economic reform, presumably after the death of Deng Xiaoping and the other senior leaders of his generation. This most optimistic scenario would assume that all five problems identified in this essay have been overcome, or at least have been rendered manageable. Retrenchment has produced satisfactory preconditions for another round of reform, leaders are determined to push forward, their economic advisers have devised a more effective strategy for transforming China's economic system, and thus the political base for reform remains secure. As a result of renewed reform, China makes a successful breakthrough to create a regulated market economy with substantial levels of private and collective ownership, and therefore achieves significantly higher rates of growth and economic efficiency.

The political uncertainties surrounding the succession in China make it difficult to estimate the probabilities for these three scenarios with any precision or confidence. Perhaps the first scenario, which rules out any new attempt at sustained economic restructuring, has the lowest probability, given the pressure for further reform from important sectors of Chinese society and the contradictions inherent in the present mixture of planning and market. Instead, it is more likely that vigorous economic reform will again be attempted in the next decade, as a new generation of leaders gradually consolidates its power after the death of Deng Xiaoping. If Deng's successors can devise an effective strategy of reform that preserves the domestic political support for restructuring, then their efforts may well succeed. But the difficulties encountered by economic reform in the Soviet Union and Eastern Europe, as well as by China itself in the late 1980s, should caution us that this most optimistic scenario is by no means inevitable. Instead, it is still quite possible that the second round of economic reform in China will meet many of the same problems, and experience much the same fate, as did the first.

CHINA'S MIXED ECONOMIC SYSTEM: PROPERTIES AND CONSEQUENCES

By Robert F. Dernberger *

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SUMMARY

Rather than survey the characteristics of the individual economic reform policies, the problems they have encountered, their impact on economic performance, and their probable fate in the future which is the purpose of many of the other articles in these volumes, this article attempts to critique the results of a new Chinese economic system that is well-defined, dynamically feasible, consistent, and efficient. For this purpose the paper relies on the work that has been done by others in the field of comparative economic systems within the discipline of economics, focusing on three key aspects of any economic system—the degree to which decision-making is decentralized and liberalized from the constraints imposed by political authorities; the role played by markets and market prices in the allocation of resources, goods, and incomes; and how "hard" or "soft" the budget constraints are on the economic decision-making units in the system. It is concluded that the current Chinese economy today, after a decade of economic reform, is not a well-defined, dynamically feasible, consistent, or very efficient economic system.

In the conclusion to the article, the question is raised, what are the more desirable or more probable alternatives open to the Chinese? On the one hand, the objective of the more radical economic reformers, a socialist economy that relied mainly on markets for determining the allocation of resources, goods, and incomes, has been ruled out by the post-Tiananmen, more conservative leadership. On the other hand, contrary to popular reports in the Western press that more conservative leadership has publicly ruled out a return to a traditional Soviet-type economy, a Chinese policy po-

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sition consistent with actual policy implementation in the post-Tiananmen (mid-1989) period. This would leave the Chinese with the choice between muddling through with the existing, incompletely reformed economic system or a better defined and more consistent mixed system, i.e. a rationalization of the existing system to restore a greater role for central planning, administrative controls, and the state-owned sector, while reducing the role of the non-state, local, and market sectors. The current Chinese leadership is experiencing considerable difficulty in its attempt to make the latter succeed before either age or popular discontent creates a new leadership that may well broaden the scope of alternative economic systems being considered.

I. Introduction

Economists in the field of comparative economic systems develop theoretical models of economic systems not because these models describe reality, i.e., the many different economies that exist in reality, but because the models provide a useful analytical framework for studying those real-world economies. The models greatly simplify reality by concentrating on a few key institutions, managed with a few crucial behavioral assumptions and constraints, to drive the major cause and effect mechanism that determines the allocation of resources, goods, and incomes. Thus, these models allow the more ready identification of the costs and benefits in the observed economic results that are due to the economic system—the system characteristics—and those due to the impact of the exogenous given and stochastic shocks and windfall gains—the environmental effects. After years of blaming poor economic results on environmental effects, poor weather, the Soviet pullout, class enemies, and hostile foreigners, following the death of Mao and the elimination of his most radical followers, the Chinese leadership critically evaluated the economic system and launched the process of economic reform at the Third Plenum at the end of 1978.

Having spent most of my academic career studying and teaching courses on comparative economic systems, when invited to present a background paper for our discussions with representatives of the State Planning Commission on the current problems and prospects of China's economic reform program, I felt my observations on the extent to which a new economic system had been achieved as a result of the economic reform program and my evaluation of that new economic system would be the most useful and informative contribution I could make. That is what I have attempted to do in this article.

I realize, of course, that even after a decade of economic reforms, the reform program remains incomplete and is a long-run process.[1]

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[1] Several years ago, in an interview with Yao Yilin, then Vice-Premier, I asked him when the Chinese economic reform program would achieve its objective and what the new economic system would look like. His response was most revealing; they had just started the economic reform program and it probably would not be completed until the middle of the twenty-first century, i.e. reform of the economic system, it would be the next generation that would determine where it would end up. About all he could say for sure was that it would be a socialist economy, i.e., have planning and state ownership in a dominant role, but would have special Chinese characteristics, i.e., not be a copy of some theoretical model or of some other country's economy.

The reforms currently (mid-1990) are suffering from indecision and hesitancy on the part of the leaders now in power and there is much to be done before the Chinese economic system can be characterized as a dynamically feasible, internally consistent, and acceptably efficient economic system. Nonetheless, as a result of the economic reforms over the past decade, the Chinese economy—while retaining some characteristics of the previous Soviet-type economic system—can no longer be adequately described by reference to that model. But what model can be used to describe the Chinese economy today?

Three economists, including myself, who have closely followed developments in China's economic reform program over the past decade, independently came to the conclusion that the first decade of reform (1978-1988) has accumulated to produce a "mixed system" and that this system is likely to characterize China's economy for some time into the future.[2] Each of the economists agreed that China's mixed system now lies somewhere well within the boundaries of the Soviet-type economy (state ownership, with highly centralized planned allocation of resources) and a market socialist system (state ownership, with decentralized, market allocation of resources).[3] These economists, however, did not go on to present a detailed institutional and functional description of China's current mixed system, and I do not propose to do so here.

Unfortunately, it is also true economists in the field of comparative economic systems have not developed a commonly agreed upon institutional and functional description or theoretical model for a mixed economic system, and such a system does not exist elsewhere in the world. Thus, I must assume the reader is familiar with the institutional and functional description of China's current, mixed economic system, amply described and analyzed in the other articles included in these volumes. For the purposes of this essay, these other articles readily show why current economic system must be identified as a mixed system rather than as a representation of one of the theoretical models provided in the comparative economics systems literature (Soviet-type economy, market socialism, regulated capitalism, or free-market capitalism), and it is not necessary to defend the use of the term "mixed economy" to describe China's current economic system here.

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[2] The three views can be succinctly stated as follows. "The present unstable state of China's mixed economy . . . may well persist over a lengthy period in the future . . . (and) there is good evidence for believing that the system of 'socialism with Chinese characteristics,' their stated objective, will retain some elements of the traditional Soviet-type economic system along with the adoption of some elements of market socialism." Robert F. Dernberger, "Reforms in China: Implications for U.S. Policy, " *American Economic Review*, Vol. 79, No. 2, May, 1989, p.21. "Internal bureaucratic politics and the dislike of certain social trends will keep China from achieving full market socialism." Dwight Perkins, "China's Economic Reforms and U.S.-China Relations," in Richard H.; Holton and Wang Xi (eds.), *U.S.-China Economic Relations: Present and Future* (Berkeley, Calif. : Institute of East Asian Studies, University of California, 1989), p. 44. "Short of very drastic and unexpected political changes, this system (China's present economic system) is unlikely to be greatly changed in the next decade." Gregory Chow, "Market Socialism and Economic Development in China," unpublished paper, October, 1988, p. 13.

[3] While the discussant of my paper accepted my designation of China's current economic system as a "mixed economic system," his colleagues from the State Planning Commission were strongly opposed to my use of this term. Apparently, "mixed systems" is frequently used by the Chinese to identify the economies of Western Europe and implies an extensive role for free markets, as well as a more limited role for planning. Thus, our hosts argued for the term "socialism with Chinese characteristics," apparently implying a dominant role for a state-sector and planning and a more restricted role for markets than would be implied by the term "mixed system." They admit the Chinese economy will be a "commodity economy," with commodities produced for exchange values, but that does not necessarily mean exchange on free markets or at values equal to free market prices.

Rather, the objective of this brief article is more limited: to identify several very important properties and consequences of this mixed economic system *as an economic system*. Obviously, considerable modifications are likely to be made as the Chinese try to "consolidate and improve" their economic system, but the system likely will remain a mixed economic system. The following discussion may suggest several areas where serious problems will require further systemic reforms and may even implicitly indicate the nature of the reforms required. Although this paper will not advocate particular cures, it will attempt to identify what I see as systemic problems associated with China's current mixed economic system.[4]

II. Decentralization and Liberalization

A major institutional and functional characteristic of China's current mixed system, which clearly places it somewhere between the boundaries of a traditional Soviet-type economic system and a market socialist system, is the degree of decentralization and liberalization the reforms have introduced in China's economy. A major theme that has run through the reforms has been the reduction in the state's direct control over allocative decisions in the economy or the removal of controls over and prohibitions on many allocative decisions that can be made by local authorities, groups, and individuals. One of the most obvious consequences of the new mixed economic system, therefore, is a much greater degree of instability in the economy. In the past, the traditional Soviet-type economic system internalized these instabilities within the budget by keeping incomes, employment, prices, the balance of payments, and even the budget itself *relatively* stable, while instability showed up as extreme changes in the level of investment and output. As a result of the economic reforms, however, the former administrative controls and constraints have been greatly relaxed, if not removed, and considerable instability has shown up in real incomes, employment, prices, the balance of payments, and the budget. Crudely summarized, the former instabilities in some real macro variables for the economy have been shifted to the financial variables *and* those variables that affect the daily life of the Chinese.[5]

While the degree of instability being experienced in the Chinese economy during the past few years may be well within the limits of tolerance for the Chinese people who have lived in a free-market, capitalist economy most of their lives, to those who have lived within or managed a Soviet-type economy for three decades, these instabilities can be quite alarming. More important, the Chinese had rather limited success in their efforts to regain control over their economy and dampen these instabilities in the latter half of the 1980s; that is, until they reinstituted rather stringent and direct administrative controls in late 1988 and in 1989 over credit, the money supply, investment funds, and foreign exchange allocations—controls that many observers found reminiscent of the Soviet-type economic system of the prereform period. Two major characteristics of China's mixed economy, created by the economic reform program, would suggest that the instability associated with this economic system may be even worse than that associated with a Soviet-type economy or capitalist economy.[6]

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[4] I obviously cannot compare my efforts in this article with those of Marx in his famous three-volume critique of capitalism. It is interesting to note, however, that Sun Yat-sen once argued that Marx was an eminent "social pathologist of capitalism," concentrating on the ills of capitalism. Sun preferred to cite social harmony and conciliation as a driving force of history and a cure for the sick patient. In any event, in the space of the few pages in this article, I hope to emulate Marx's approach and provided a radical diagnosis of China's present, mixed economic system.

[5] For example, while budget deficits, price increases, and balance-of-payments deficits were becoming serious problems compared to the situation in pre-1978 China, the coefficient of variation (standard deviation divided by the mean, expressed as a percent of the annual growth rate of national income) declined from 159.64% in 1952–1978 to 34.75% in 1979–1986.

According to a summary report of the meeting, the error had been the excessive introduction of marketization and privatization which had been due to a misunderstanding of the ground rules for the reforms by the radical reformers. The latter had come to believe that mandatory planning was to be phased out over time; that had never been part of the "official" reform program (the scope of mandatory planning was to be *reduced*, not phased out). The radical reformers also had believed that guidance planning was not mandatory; guidance planning was based on "reference" targets issued by the central planners and lower levels were to work out concrete plans in negotiations with the enterprises using the guidance plans as reference. Nonetheless, those negotiations were to result in targets that were mandatory.

Finally, the radical reformer believed that the desire to introduce market "forces", by "relying on values" to better "balance" supply and demand meant that we must rely on *free* markets to do this. While the Chinese do hope to utilize values that better reflect supply and command conditions in their planning and allocation decisions, this does not mean it was necessary to turn the economy over to private individuals competing on free markets to achieve that objective. For a summary of the statements made at the symposium of Chinese economists and scholars who met "recently" in Beijing to discuss the problems in China's economic reform program, see "Integrating Planned Economy with Market Regulations," in *Beijing Review*, Vol. 33, No. 22, May 28–June 3, 1990, pp. 20–22.

Even before the economic reform program was launched by the Third Plenum at the end of 1978,[7] Hu Qiaomu had called for a transformation from intuitive policies implemented by means of direct administrative controls to a system of indirect economic levers (incentives). As the reforms unfolded, Chen Yun (the major leader of the conservative reform faction) urged the reformers not to forget to build a bird cage (Hu's indirect economic levers) or the bird would fly away. Nonetheless, the more radical reformers, who had gained control of the reform program by the mid-1980s,[8] showed much greater skill in removing controls and constraints in their pursuit of decentralization and liberalization than they did in developing a system of indirect controls to replace those former constraints. Conversely, the free-market, capitalist systems have adopted extensive networks of indirect economic controls to constrain instability to the extent that economists in the field of comparative economic systems now refer to the latter economies as regulated-market, capitalist systems in parallel fashion, China's mixed system could well be labeled un unregulated, mixed system.

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[6] In this regard, it is interesting to note that in our discussions with representatives of the State Planning Commission they clearly believed a market economy, even a regulated one, was not only unstable, but led to chaos. In fact, they viewed the major problem of the economic reform program in the past as just that, i.e., the too extensive introduction of marketization and privatization, which had led to the loss of control over the economy and chaos. At one point in our discussions, one speaker hinted that China's size and level of development made the danger of market instability even greater. Admitting that a market economic system might have worked well in small island economies (Hong Kong, Singapore, etc.), where prices were largely determined by the world market, the size of China's economy, its level of development, and weak transport and marketing network meant that the introduction of free markets would lead to unacceptable income differences, instabilities, and structural maladjustments (to those Chinese we were meeting with, at least). In fact, at about the same time we were in China, a conference of Chinese economists was being held to determine where and why the reforms had gone wrong and what to do about it.

[7] Hu Qiaomu, "Observe economic laws, speed up realization of the four modernizations," *Renmin Ribao*, October 6, 1978 (translated in *Beijing Review*, Nos. 45–47, November 1978.

Another institutional feature of China's mixed economic system that reinforces its instabilities is the almost complete absence of well-defined and enforced property rights. Obviously, various regulations have been issued as to who has the right or authority to make specific decisions and carry out specific economic activities, but large areas of economic activity are not covered by these regulations. For those areas that are covered, considerable uncertainty, which facilitates, and even creates, instability, is created by backdoor deals to evade these regulations, arbitrary interference by administrative and party cadre in what are supposedly approved and even encouraged economic activities, outright corruption or criminal activities, and just plain failure of local cadres to implement the new laws and regulations they happen to oppose. The capitalist system is based on well-defined property rights and a legal system to enforce them, while those who live in a Soviet type economy quickly learn who has control over, and the right to allocate, resources and goods. The Chinese, obviously, also must learn who has this power in their mixed economy, but the number of people who *may* be involved in these decisions is very large, may change form one time to the next, and their behavior may be very arbitrary. To function anywhere near its potential, any economic system must have property rights that are much better defined and enforced than is true of China's mixed economic system today.[9]

III. MARKETS AND PRICES

A second major characteristic of China's mixed economic system is the significant increase in the role of markets and market prices compared with their role in the traditional Soviet-type economy. There may be some disagreement about the existing mix or the desired mix of plans and markets, but there can be no denying that the scope of the planner's control over the allocation of resources and economic activities has been significantly reduced over the past decade, while economic activities and decisions subject to market forces have been greatly increased.[10]

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[8] In our discussions with the representatives of the State Planning Commission and in our interview with Ma Hong (one of China's leading economists with direct access to the political leaders) made it clear that the reevaluation of the economic reform program made after the summer of 1989 (i.e., after Tiananmen) identifies the early 1980s as the "golden age" of the reforms. Things are now believed to have gone wrong after October of 1984 (i.e., the Plenum that expanded the economic reforms to the urban-industrial and elevated Zhao Ziyang and his more radical reform followers to a more dominant position in control of the reform process).

[9] The Chinese reformers have held considerable debates and published many articles on the different forms of ownership that are to be part of their economic system during the preliminary stage of socialism; state, cooperative, private, and individual. I believe much of these discussions misses the point entirely, being largely concerned with the form of ownership and paying little attention to the *property rights* of the owners, whoever they may be. An individual may be given the title of a private owner, but what does it mean if they do not have any property rights in what they "own", i.e., the ability to transfer the property or its services or output to others, and the right to receive and use the income created as a result of that transfer.

Unfortunately, however, the term "market" has been used to indicate many quite different things: free markets, regulated markets, segmented markets, etc. Each type of market, of course, has different properties and consequences. While the Chinese reformers seek the many benefits associated with reliance upon *free* markets, it is doubtful that the type of markets introduced in China by the reformers will produce those results. As defined in comparative economics literature, free markets assume competition on both sides of the market (supply and demand); this competition produces true scarcity prices *that are used* to make choices over alternative uses of resources, goods, and funds. Thus, for example, the competition on the supply side generates reduced costs and technological innovations in attempts to beat the competition; while those suppliers who cannot compete are eliminated. Few of these characteristics of markets and market prices are to be found in China's mixed economic system.

Almost every economy in the world, whatever its economic system, relies upon markets to some extent. In addition, interference in markets in order to redistribute incomes, protect domestic producers, etc., means that markets are no longer free even in the market, capitalistic economies. In China's mixed system, free markets have been introduced for some commodities and activities, especially for selected agricultural products, consumer's goods, and services. In general, however, the terms "market " and "market prices" as they exist in China's mixed economic system identify transactions and price formations that are subject to very severe restrictions and constraints.[11] Competition, to the extent it exists, is largely on the buyer (demand) side, not the supply side. And the introduction of markets for goods has made much more progress than markets for the factors of production. Shortages are prevalent, with many of the goods in short supply having a fixed official price that is considerably lower than the "market price".

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[10] None of the readily available statistics can be used to indicate the proportion of economic activities subject to the *influence* of the planners and the proportion subject to market *forces* in China's present mixed economic system. It should be obvious, however, that the share of economic activity carried out by cooperative, private, and individual economic units is not an accurate estimate of economic activities subject to market *forces* and probably is an underestimate of that share. On the other hand, the same share of economic activity carried out *on* "free" markets. See text, below, for a fuller explanation of this important distinction of the determinants of economic activity in China's current mixed economic system.

[11] On the basis of discussions with representatives of the State Planning Commission, it appears that a relatively small share of economic activity in China was being directly determined by assigned planned targets *or* was solely due to market forces. Rather, as a result of the economic reforms, most economic activities were the result of bilateral negotiations at various levels, within the context of various administrative constraints imposed at various levels, even though those activities may appear to have been nonplanned and use what are referred to as market prices. In addition, the data and interview responses from micro-level enterprise surveys being conducted for various collaborative research projects indicate very clearly that most transactions, even those carried out at "market" prices, involve bilaterally negotiated side-payments by the buyer in money or in commodities, which are not reported as part of the transaction. In short, the grey area between plan and market may well dominate China's current economy and that economy may be best identified as a constrained and regulated, barter economy.

Some observers believe these "market prices" are the effective prices for producers and consumers on the margin or that the share of goods traded at these "market prices" replace the administered prices.[12] On the other hand, the present mix of plans and markets or administered prices and market prices has created an environment that fosters speculation and corruption as much as profit seeking by means of a more rational allocation of goods and resources, cutting costs, and increasing factor productivity.[13] In addition, Chinese leadership that markets repeated decisions to reform prices and remove many of the constraints that the central and local officials impose over market transactions usually cites the need to "consolidate" and "stabilize" the economy before proceeding further with these needed reforms. Thus the present version of China's mixed economic system would appear to be bogged down at a midpoint in the transition form the old economic system to a new one. As a result of the tragic and ominous manner the student-inspired demonstrations of May–June of 1989 were ended by the revitalized conservative-wing of the Chinese Communist Party, attempts to retain and reinforce central controls over the economy dominated the post-Tiananmen leadership's agenda throughout the remainder of 1989. When these attempts resulted in a recession and pessimistic reactions by foreign investors, the Chinese leaders launched an effort to relax their retrenchment and convince the Chinese people, as well as foreigners, of their intentions to pursue domestic economic reform programs and the policy of opening the Chinese economy to foreign trade and investment.[14]

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[12] For example, in his analysis of the Chinese economic reform program in the 1986 Joint Economic Committee collection of papers on China's economy, it was Barry Naughton who first identified the Chinese economic reform strategy as an attempt to "grow out of the plan".

[13] To analyze and discuss the positive and negative impacts on economic efficiency of China's severely constrained markets and dual price systems is an important topic for research and cannot be dealt with properly here. Most theoretical models that have been developed to represent and analyze China's mixed economic system *assume* enterprises and households are all operating in free markets *on the margin*, i.e., assume the problem being studied away. For example, see William A. Byrd, "Plan and Market in the Chinese Economy: A Simple General Equilibrium Model," in *Journal of Comparative Economics*, Vol. 13, No. 2, June, 1989, pp. 177–204. Using a general equilibrium approach, Terry Sicular is engaged in a project, "Planning and Markets in China's Economic Reforms: Theory and Evidence," with the objective of driving the conditions under which plan and market *can* coexist in a complementary fashion, also believing that present theoretical work and the literature do not provide us with that information. The point being made here in this brief article is that those necessary conditions do not presently exist in China's mixed system; the plan and market exist in a competitive rather than a complementary manner and the markets and market prices that do exist are subject to such constrains that they cannot be expected to achieve the benefits claimed to result from markets and market prices in other economic systems.

[14] Our Chinese hosts at the State Planning Commission presented us with several lengthy and vigorous defenses, illustrated with numerous specific policy changes in the past year, of their dedication to continuing the domestic economic reforms and the policies of opening the Chinese economy to foreign trade and investment. Compared to the many exaggerated and unsupported assertions in the Western press that the Chinese have "abandoned" the economic reform program or are "turning the clock back" to the 1950s, their arguments were very convincing. It is the pace and direction of economic reform that is at the heart of the debate in China, not the question of reform itself. And it is somewhat unfair to accuse the Chinese of "abandoning" a reform they had never adopted, as some observers in the U.S. government claim, i.e., the creation of a free market economy without a state sector and economic plans. To the Chinese, planning and state enterprises define a socialist economy; yet, they do hope to reform that economy to make it work better. In fact, according to many of the Chinese we talked with, it is the period of the early 1980s, not the 1950s (and certainly not the 1960s or 1970s, i.e., the Maoist economic regime) that represents the "golden age" of Chinese economic policy.

Nonetheless, the current efforts at reform and the reforms being considered envisage a limited and cautious pace of reform, with a much greater bias in favor of state-sector enterprises than was true in the past. The foreseeable future, therefore, would not appear to offer any bold new attempts to move forward with privatization, marketization, and price reforms.

"(W)hile it is impossible to see clearly the ultimate destination of China's reform process, it is possible to discern the next stage of the journey: a distinctive Chinese strategy of reform in which market forces are allowed to exert progressively more influence on enterprise decision-making, thus 'squeezing' the administered economy into new patterns. In its most extreme form, this strategy will compel the industrial economy to gradually 'grow out of' the plan, while planners use the transition period to gain experience in the techniques of controlling the economy through indirect means." Barry Naughton, "Finance and Planning Reforms in Industry." [15]

IV. SOFT BUDGET CONSTRAINTS AND SUBSIDIES

Enforcing hard budget constraints on enterprises, cooperatives, and individuals is the way market competition weeds out either the high-cost and inefficient producers, those who produce output for which there is no market demand, or those buyers who have less urgent demands. A soft budget constraint merely means these producers and buyers are provided funds by the banking system or by the state budget so they can continue their activities. Despite much rhetoric about the need to impose a hard budget constraint and their desire to do so, the Chinese have found it very difficult to achieve this objective, not only for broad political and social reasons, but also due to some specific economic interest group pressures. Those who receive the subsidy may profit economically at the expense of those who pay it, while the economy as a whole often suffers an economic and/or welfare loss. Conversely, the advantage of markets and market prices is that they determine who has "earned" the benefits and who should bear the "costs," while the economy as a whole usually gains.

Obviously, there is a significant transition problem in transforming a Soviet-type economy to a mixed economic system. The windfall benefits of this transformation should become a social, not a private gain; while the burden of the costs imposed by the transformation also should be shared by society as a whole. In other words, the Chinese reformers should be devoting their efforts to acquiring the windfall gains of the reforms for society as a whole, rather than allowing them to be captured by individuals and units who in no way earned them. Equally important, the leadership should be steadily phasing out subsidies for producers and buyers who cannot meet the tests of market competition. Yet, to say the least, the Chinese authorities have been rather timid in introducing harder budget constraints.[16] Quite simply, the reformers do not seem to be

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[15] Joint Economic Committee, U.S. Congress, *China's Economy Looks Toward The Year 2000*, Vol. I., "The Four Modernizations" (Washington, D.C.: U.S. Government Printing Office, 1986), pp. 604-605.

[16] In our discussions with the representatives of the State Planning Commission, compared to earlier meetings with similar groups, the extent to which they relied upon several "excuses" to

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prepared to enforce hard budget constraints. Unfortunately, these transitional problems threaten to become permanent characteristics of China's mixed economic system.[17]

Again, the Chinese reformers have made a normal transitional problem worse than necessary by adopting policies that encourage most people to believe that the costs imposed by any policy or institutional change will offset by the *creation* of a new subsidy to the group that would have to bear the cost. The literature in comparative economic systems suggests that a major distinguishing characteristic of different economic systems is whether or not they impose a "hard" or a "soft" budget constraint on producers and consumers.[18] The Chinese economic reformers have not only had difficulty in trying to "harden" the budget constraint, they have made this already difficult task even harder by awarding new subsidies to those groups that may be hurt by the introduction of a more rational price system and allocation of resources and goods. The resulting inflation, of course, allocates the costs of reforms, but does so in a very inequitable and inefficient manner. In the end, the central government has found it necessary to devote a significant share of budget revenue to subsidies,[19] which has thwarted the achievement of a more efficient allocation of resources and goods.

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explain why they could not introduce a particular reform policy we were arguing was needed was quite remarkable; "that would lead to unemployment," "that would have a negative impact on the budget," "the workers wouldn't accept that," and so on. In my opinion, such responses indicated that those relying on these arguments either believed they had lost the ability to implement reform policies (or any unpopular policies) at the local level or had lost considerable popular support for the needed economic reform policies, possibly both. If true, this would further support the argument in the text, above, that we should not expect any bold new attempts to move forward with the economic reform program in the near future.

[17] There are those who believe a successful economic reform program must be introduced as a sudden, once-and-for-all complete removal of the old Soviet-type economic system and creation of the institutions of the new economic system, i.e., the approach Poland is pursuing (and, to some extent, Hungary and Yugoslavia have pursued for some time). In fact, it is argued that Hungary and Yugoslavia have not been terribly successful in their reform efforts precisely because they failed to eliminate the dominant role of the Leninist Party in the economy and the very close ties between administrative units of the government and the enterprises, even though they did remove most of the institutions of the traditional Soviet-type economic system. For one of the strongest and somewhat emotional statements of this point of view, see Janos Kornai, *The Road to A Free Economy: Shifting from A Socialist System* (New York: W. W. Norton & Company, 1990). No economy has made this transition successfully yet, but much should be learned over the next decade as to whether sudden and complete political and economic reform of the traditional socialist system or a succession of more gradual and marginal reforms has the better chance of succeeding.

[18] The use of "hard" and "soft" budget constraints as a key variable in analyzing the differences between economic systems, and especially in measuring the degree to which economic reforms work to achieve systemic changes, comes form the writings of Janos Kornai. See, especially, Janos Kornai, *Economics of Shortages* (Amsterdam: North Holland, 1980); idem., "The Soft Budget Constraint," *Kyklos*, 1986, 39 (1), pp. 3–30; and idem., "The Hungarian Reform Process," *Journal of Economic Literature*, 1986, Vol. 24 (4), pp. 1687–1737.

[19] In 1988, despite ten years of economic reform, "subsidies for losses by enterprises amounted to 44.583 billion yuan (and t)his amount was deducted form total receipts." On the expenditure side of the budget, "subsidies to compensate for price rises totalled 31.695 billion yuan." These subsidies, of course, are not the only subsidies included in the budget, i.e., many of the bonuses awarded to workers in state enterprises are little more than direct subsidies, awarded at the expense of the state's revenue. In the draft budget for 1989, these two subsidies were *scheduled* to decline to 20 billion yuan and 5.5 billion yuan, respectively. If these targets had been achieved, it would have represented a major turn around in the authorities efforts to move towards a "hard" budget. For the quotation and figures cited above, see Wang Bingqian, "Reported on the Implementation of the State Budget for 1988 and on the Draft State Budget for 1989," *Beijing Review*, 1989, 32 (18) pp. xi–xvii (centerfold). Unfortunately, however, in 1989 the actual subsidies paid out for losses of state enterprises and deducted from revenues were 59.976 billion yuan and subsidies paid out to compensate for price rises were 37.034 billion yuan. Thus, instead of declining by two-thirds in 1989, as planned in the draft budget, subsidies increased by 27 percent. Accepting reality, somewhat, the budget for 1990 includes a ten percent increase in

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V. CONCLUSIONS

While the Chinese economic reform program has increased the degree of decentralization in decision-making and liberalized the constraints upon those decisions, the leadership has done little to create a system of indirect controls ("economic levers") to replace the direct controls that have been removed, or to create a well-defined set of property rights so that private and cooperative units and managers of public units have the ability to carry out their decisions in the absence of arbitrarily imposed constraints. While markets have been created for large areas of economic activity, continued reliance upon administered prices, the lack of market access, the weak degree of competition on the supply side, the very limited mobility of factors, etc., all mean that market forces fall far short of the objectives for which markets are adopted and relied upon in other economic systems. Finally, while reformers have tried to "tighten-up" budget constraints upon inefficient enterprises and behavior, they have created the expectation and reality of soft budget constraints for individuals, groups, and enterprises to the extent the resulting redistribution of income, goods, and resources needed for their more "efficient" allocation is seriously eroded.

How, then, do we evaluate this new Chinese mixed economic system? To begin, it is interesting to note that the three economists mentioned at the outset of this paper, each came to different conclusions about the merits of that economic system.[20] Dwight Perkins, while agreeing that the present mixed system is preferable to the previous Soviet-type economic system, argued the need for further efforts to push forward to a true "market-socialist economic system (public enterprises, but with profit-maximizing behavior rules for enterprise managers replacing assigned plans determined by planners, and with market-clearing prices being set by the authorities) before the Chinese economy could claim to be efficient. Gregory Chow, on the other hand, argued that the mixed economic system the Chinese were seeking was likely to be more efficient and desirable *than any market socialist system could be expected to function in the real world.* Presumably, Gregory Chow believed that the mixed economic system the Chinese sought would improve the current mixed system of central planning and markets by creating an effective monetary and fiscal policy, adopting and implementing a well-defined set of property rights to complement the mixed system of ownership, removing many of the existing constraints and limitations on market economic activities, and moving toward much harder budget constraints through steady elimination of most subsidies.

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both subsidies for losses of state enterprises and subsidies to compensate for price rises *as targets*. Recognizing that these subsidies are "equivalent to one-third of the state budget" and that they "have been growing rather rapidly," the Minister of Finance merely states that "[t]his problem calls out for our keenest attention and serious study so that practicable (sic) solutions can be found." Wang Bingqian, "Report on the Implementation of The State Budget for 1989 and on The Draft State Budget for 1990," *Beijing Review*, Vol.33, No. 17, April 23-29, 1990 (centerfold). Cited budget figures are from pp. IX-XII and the quoted phrases are from p. XIII.

[20] For their different conclusions, summarized below the text, see the sources cited in footnote 2, above, in this article.

These modifications in the present mixed economic system undoubtedly would improve the efficiency of the Chinese economy significantly, but the policies of the past year or more represent an attempt to perfect their existing mixed economic system by moving in a direction quite different from either of the options discussed by Perkins or, presumably, by Chow. Rather than try to implement effective monetary and fiscal policy by relying on indirect economic levers, the effective monetary and fiscal policy regimes being pursued rely more on direct administrative controls. Rather than trying to improve the functioning of markets and allowing market forces to play the role they were supposed to achieve, for the sake of stability even grater reliance is being placed on direct interference, prohibitions, controls, etc. Yet, rather than tightening the soft budget constraints on individuals and units throughout the economy, the use of subsidies or grants to prevent discontent and loss of support for the leadership is threatening to change China's economy into yet another type of economic system—a grants economy.

Obviously, as argued by Perkins, the creation of a true market-socialist economy with a large private sector would be much more efficient than the existing mixed economic system in China. Yet, I do not believe the Chinese people, let alone their current leaders, have the political will necessary for pushing reforms further to create a true market-socialist economic system, at least at the present time. In addition, the less dramatic, but vitally important modifications required to make China's present, mixed economic system more efficient than either a market socialist economic system or a traditional Soviet-type economic system also lie well beyond the bounds of political acceptance by China's present leadership. Some observers doubt that their leaders still have the effective political control and administrative capability to implement the needed reforms successfully, even if they desired to do so.

Developments in China's system reforms in the past two years (beginning well before the tragic developments of May-June of 1989), indicate that China's current leaders have been pursuing a mixed economic system best described as (1) a system dominated and controlled by the central authorities, (2) an economic system in which both central plans and markets coexist, but where the planned allocation of key commodities governs the changing structure and growth of the economy and the market sector activities are carried out on very imperfect markets within serious administrative constraints; and (3) a system in which the central authorities rely very heavily on subsidies and grants to achieve the allocation of resources and goods they desire, overriding the results that would hold from decentralized decisions based on true scarcity prices for the sake of maximizing profits. Needless to say, the Chinese authorities encountered considerable difficulty in their attempts to realize this more conservative model of a reformed Soviet-type economy, much to the discredit of the more conservative reform advocates among the current leadership.

To the extent that these observations are correct, the real issue to be addressed by both outside observers and the Chinese themselves is not the merits of a choice between alternative ideal-types of theoretical models of economic systems, inasmuch as both moving forward to a market socialist economic system or returning to a traditional Soviet-type economic system are not among the alternatives actually being considered. Rather, the choice has been narrowed considerably by the existing political environment (i.e. the unreformed political system and the existing political leaders and most likely candidates for replacing them in the near future) to a choice between the mixed system now in place (with all its inconsistencies and inefficiencies) and the reformed Soviet-type economy the current leadership appears intent on creating.

Some may argue this is a false posing of the choices to be made. For example, recent developments in the socialist world indicate to some that there is only one superior choice—a market economy. Others may agree that while a market socialist economic system may not be a feasible choice facing the Chinese at the present time, or even in the near future, the current leadership is bound to die soon and be replaced by those more sympathetic to the radical reformers, who will return to create a market socialist economic system in the not-too-distant future. The political and economic future of Eastern Europe and China is not certain or inevitable and, as a specialist in comparative economic systems, I do not believe in the superiority of a single economic system for achieving the host of objectives, including noneconomic ones, any society may have. Certainly the evidence is not yet in as to the results of the various *different* attempts to reform the Soviet-type economic system throughout the socialist world.

Some socialist economies in Eastern Europe are trying to abandon their previous Soviet-type economic system and adopt a regulated market economy or a market-socialist economic system; still others are trying to rationalize their Soviet-type economies. The Chinese, who have already achieved a mixed economic system, are trying to move that system toward a mix with greater emphasis on central control, planning, and state-ownership. Thus, this generation is most fortunate in having the opportunity to learn a good deal about the feasible and desirable choices in reforming the Soviet-type economic system from one of the few true economic system reform experiments in history, including several different objectives and strategies. It is unfortunate that the Chinese, who have been engaged in the reform of their economic system longer than most other socialist countries now following their lead, have ruled out the attempt to push forward to a socialist system based on markets, which could well be a significantly more efficient economic system than the choices they are now considering.

THE PERFORMANCE OF CHINA'S ECONOMY

By Lee Zinser *

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SUMMARY

In the past three years, China has experienced its sharpest economic swing since Beijing began experimenting with market-oriented reforms in 1979. Inflation reached 30 percent in some Chinese cities in 1988 because economic decentralization during the 1980s created growing investment and consumption demands but reforms did not go far enough to create effective indirect monetary and fiscal instruments that Beijing could use countercyclically. Strict credit and investment controls cut inflation to single-digit rates by late 1989, but they brought economic growth virtually to a halt and caused rising unemployment, slumping industrial efficiency, and a widening government budget deficit. Since early 1990, Beijing has tried to "fine-tune" its retrenchment measures by easing credit while extending central controls. Without efficiency-enhancing market reforms, however, large state enterprises probably will not become engines of growth even with increased government allocations of energy and raw materials; thus Beijing will be reliant on easier credit to spur growth. Strong opposition by pro-

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vincial leaders has slowed Beijing's efforts to reclaim financial authority from local governments and enterprises so inflationary pressures could build again as credit controls are eased. Although austerity measures have created favorable economic conditions for proceeding with market reforms, for the near term China's leadership probably will prefer stopgap policies designed to maintain social stability rather than riskier policies for growth and development.

I. ECONOMIC OVERHEATING IN 1988

Chinese leaders confronted an economy in 1988 that was seriously overheated. According to Chinese statistics, real GNP grew by about 11 percent and industrial output—including production by village-level enterprises—surged almost 21 percent.[1] This worsened China's energy and raw materials shortfalls and transportation bottlenecks. As a result of excessive demand pressures, inflation reached post-1949 highs of 18.5 percent overall and almost 30 percent in some urban areas. Moreover, Beijing's budget deficit grew by two-fifths to a record 35 billion yuan ($6.7 billion) and the trade deficit more than doubled to $7.7 billion.

The proximate cause of the economic overheating was excessive monetary growth. After imposing strict credit controls in 1985 to combat overheating then, authorities began implementing easy credit policies in 1986. China's money supply grew at close to a 30-percent annual rate in the first three quarters of 1987 before Beijing slowed credit growth moderately in the fourth quarter. But Beijing relaxed credit controls in early 1988, apparently to spur industrial growth and lay the groundwork for a new round of enterprise reforms. Currency in circulation, one indicator of monetary tightness, grew 47 percent in 1988—the fastest growth since 1984.

The excessive monetary growth, however, was a symptom of a larger problem caused by the incomplete nature of the industrial reforms Beijing had been experimenting with for a decade. Since 1979 Beijing had steadily increased the share of revenues that state enterprises and local governments retained and gave them greater latitude over how funds were spent. Indeed, retained earnings of state enterprises were eight times larger in 1988 than when reforms began, according to the Chinese press. Beijing did not implement meaningful bankruptcy measures, however, and, without that market-oriented control mechanism, factory managers took advantage of increased decisionmaking autonomy to expand investment spending and worker remuneration without regard to efficiency. Local authorities also pushed ahead with ambitious development projects. Consequently, since the early 1980s, investment spending

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[1] Most figures cited in this paper are official Chinese statistics. They are reported because they provide useful indications of the direction and magnitude of economic performance even though collection techniques are sometimes crude, local officials have been known to deliberately distort data, and some estimation techniques are questionable. For example, annual estimates for retail price inflation probably understated the true rate in 1988 and 1990 and overstated the true rate in 1989 because authorities apparently averaged monthly inflation rates (calculated by comparing the price index in each month with the index in the corresponding month of the previous year) to derive the annual estimates. For a discussion of the reliability of Chinese statistics, see "Allocation of Resources in the Soviet Union and China," Part 14, executive sessions April 14 and July 7, 1989, Subcommittee on National Security Economics, Joint Economic Committee, pages 208-212.

Table 1

Key Chinese Economic Indicators, 1987-90

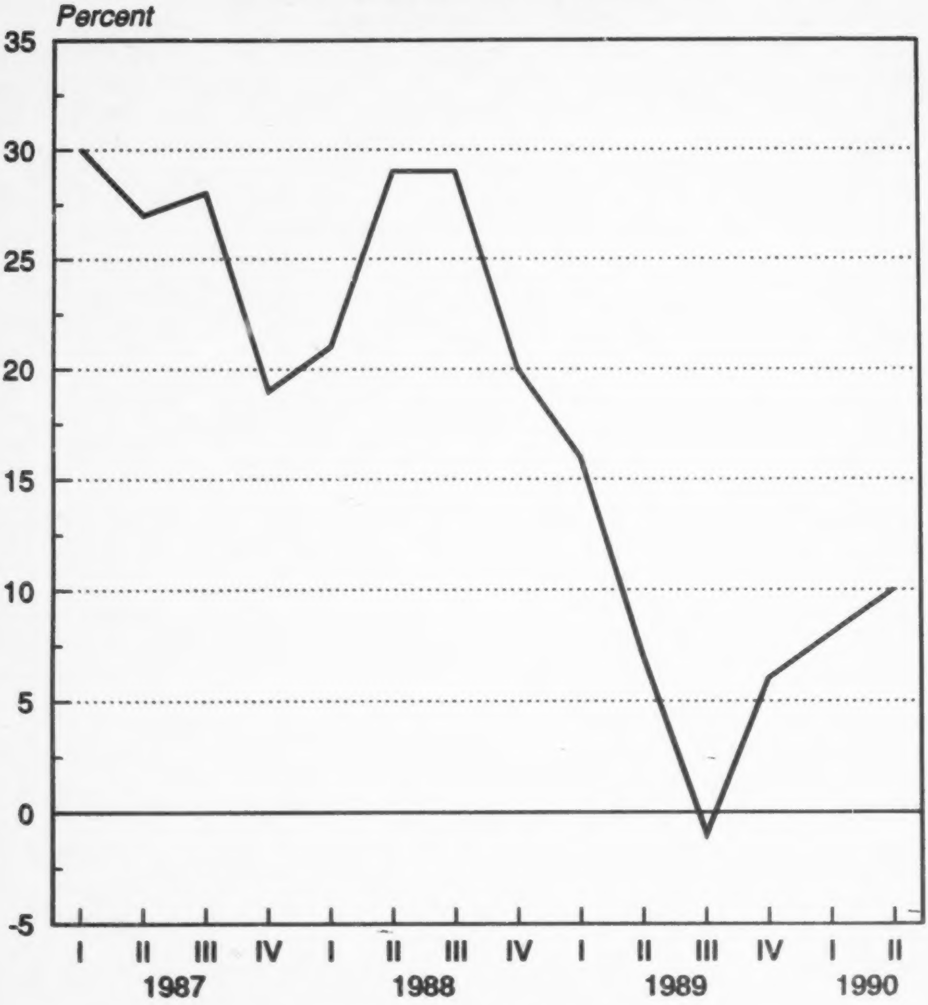
	1987	1988	1989	1990*
Real GNP growth (percent)	11.0	10.8	3.9	4.4
Real GVAO growth (percent)	5.8	4.0	3.3	5.0
Real GVIO growth (percent)	17.7	20.8	8.3	7.0
State-owned industries	11.0	12.7	3.7	2.9
Collective industries	25.0	28.8	10.7	6.9
Private industries	48.0	46.0	24.1	N/A
GVIO growth of heavy industry (percent)	16.7	19.4	8.2	4.6
GVIO growth of light industry (percent)	18.6	22.1	8.4	7.4
Coal production (million metric tons)	928	980	1,040	1,090
Oil production (million metric tons)	134	137	137	138
Electricity production (billion kwh)	497	545	582	615
Steel production (million metric tons)	56.3	59.4	61.2	66.0
Grain production (million metric tons)	403	394	407	420
Cotton production (million metric tons)	4.25	4.15	3.79	4.25
Labor productivity growth (percent)	7.6	9.3	1.6	-0.8 (through Sept)
Total investment (billion yuan)	364	450	400	N/A
State investment (billion yuan)	230	276	251	N/A
Retail price increase (percent)	7.3	18.5	17.8	2.0
Retail sales (billion yuan)	582	744	810	825
Average per capita urban income (yuan)	1,012	1,192	1,260	N/A
Average per capita rural income (yuan)	463	545	602	N/A
Budget subsidies for enterprise losses (billion yuan)	37.6	44.6	60.0	N/A
Price subsidies (billion yuan)	29.5	31.7	37.0	N/A
Exports (billion US $)	39.44	47.52	52.49	62.07
Imports (billion US $)	43.22	55.27	59.14	53.36
Trade balance (billion US $)	-3.78	-7.75	-6.65	8.71
Foreign exchange reserves (billion US $)	15.2	17.5	17.0	27.0
Exchange rate (yearend, yuan/US $)	3.72	3.72	4.72	5.23

* Preliminary

Source: Official Chinese statistics.

Figure 1

Growth in China's Seasonally Adjusted Money Supply, 1987-90



Source: IMF International Financial Statistics.

grew at more than a 20-percent average annual rate, and real wages of state industrial workers generally increased faster than labor productivity.

The widespread adoption of an enterprise contract system in 1987 also contributed to inflationary pressures. Under the system, factory managers agreed to remit a specified amount of revenues to the state. Once they fulfilled the contract, additional enterprise profits were to be taxed at a much lower rate, or not at all. Without a meaningful threat of bankruptcy, this provided a strong incentive to factories to boost investment spending and plant output.

Beijing's failure to complete price reform also contributed to the overheating. Although authorities took some significant steps during the 1980s to ease irrationalities in China's pricing structure—including raising state procurement prices for grain, decontrolling prices of nonstaples and many consumer durables, and allowing sales of overquota industrial products at market prices—prices of energy and key raw materials were held artificially low by the state. Because raw materials were relatively cheap, manufacturing industries could generally make profits even if factories used inefficient, outmoded equipment. This encouraged local officials to use their increased revenues to invest in manufacturing industries, which increased the demand on supplies of energy and raw materials.

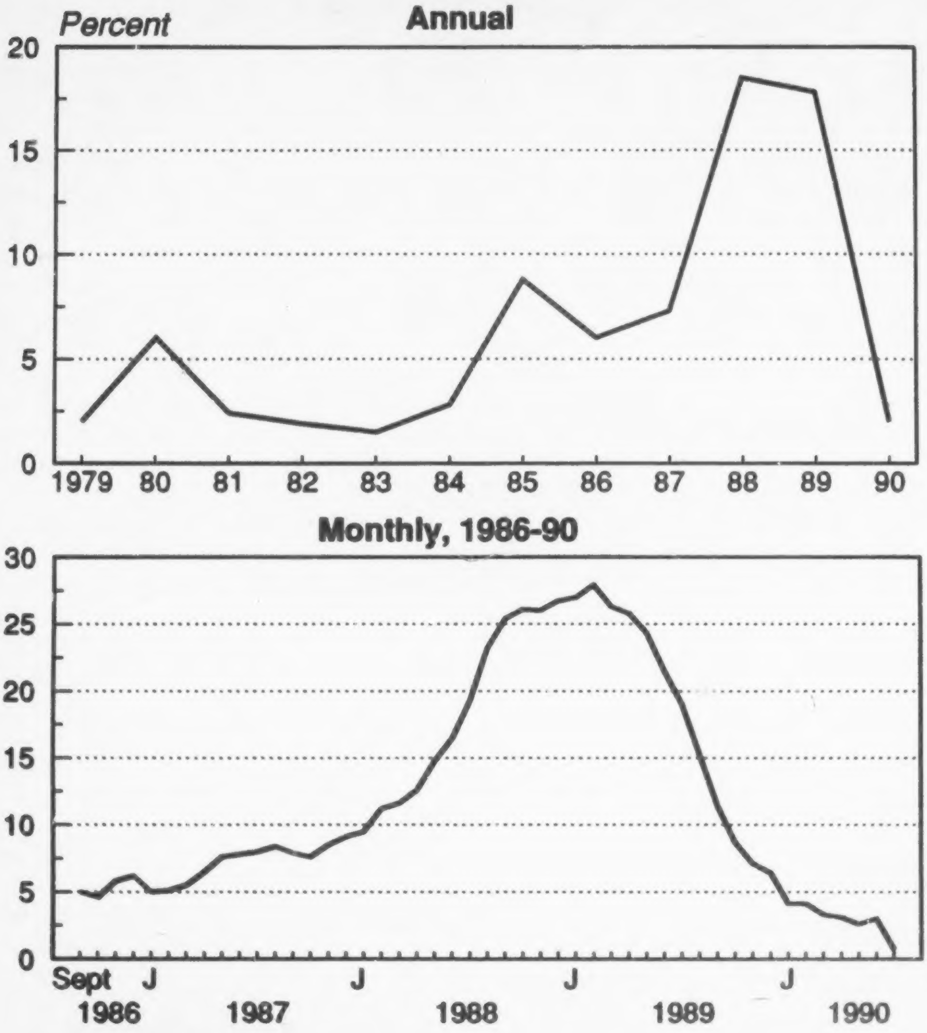
The inflationary consequences of economic decentralization were somewhat muted in the early 1980s by reform-driven efficiency gains in key sectors. In particular, production of grain and cotton increased about 8 percent and 28 percent annually, respectively, between 1981 and 1984 because Beijing hiked procurement prices and allowed peasants to retain profits from overquota production. This helped Beijing meet rising consumer demands for food and clothing caused by urban wage increases. Hikes in coal prices and policies allowing individuals and local governments to open their own mines helped cause coal output to grow 8 percent a year during the same period, allowing power plants to generate increased amounts of electricity, which contributed to rapid industrial growth, particularly by locally run firms manufacturing consumer items. The production gains from breaking up the communes were exhausted by 1985, however, and the gains from opening individual mines also began to taper off during the latter half of the 1980s.

The surge in prices in 1988, thus, was part of a trend of increased inflation since the mid-1980s, as growing overall demand fed by surging wages and capital construction outstripped supplies of consumer goods and industrial materials. The inflation rate tripled in 1985 to almost 9 percent, pushed along by a rapid increase in the money supply caused by moves the previous year to decentralize the banking system. After remaining near the new plateau for two years, inflation more than doubled in 1988.

The discrepancy between rising consumer demand and lagging agricultural production was particularly notable in 1988. Grain production fell about 2 percent because of adverse weather, relatively low state-set procurement prices, and rising costs of agricultural inputs such as fertilizer, seeds, and plastic sheeting used as mulch. Sluggish production of industrial crops like sugar, ramie,

Figure 2

China's Inflation Rates, 1979-90



Note change in scales.
Source: Official Chinese overall retail price index.

and cotton caused production costs to rise in food processing and textile industries.

II. LACK OF INDIRECT MACROECONOMIC INSTRUMENTS

The economic consequences of industrial overheating in 1988 were compounded because reforms had not progressed far enough for Beijing to use restrictive monetary and fiscal policies efficiently. When Beijing began decentralizing control over revenues and dismantling the planning apparatus, reformers believed they could use such indirect economic levers as monetary and fiscal policies to compensate for the central government's diminished direct control over enterprises. But because reforms succeeded in delegating administrative authority to local governments, rather than creating markets and financial accountability, Beijing could only carry out monetary and fiscal policies with the help of local officials.

Provincial and municipal officials are more concerned with speeding development of their own economies and boosting local standards of living, however, than complying with central directives to implement restrictive monetary and fiscal policies. Municipal leaders benefit from using increased bank loans and tax revenues to fund new industrial projects because these efforts create jobs for local residents and additional tax receipts for city coffers. This is particularly true because municipalities erect barriers to trade that prevent firms in other regions from competing in the local market. On the other hand, the costs of excessive local spending—increased shortages of raw materials, disruption of planned production by state factories, and higher prices—spill over to the economy as a whole.

Thus the decentralization of planning and financial authority that was instrumental in spurring rapid economic growth also made it difficult for Beijing to use fiscal and monetary policy instruments countercyclically. The system of "tax farming" and multiyear revenue contracts in which provinces guarantee specific levels of tax remittances to central authorities put tight constraints on the use of fiscal policy. Beijing had no market levers to reduce local government spending and was reluctant to cut its own spending for such items as key infrastructure projects, subsidies, administrative expenditures, defense, and education.

Central bank control over the money supply was weakened, moreover, by provincial and municipal leaders who applied pressure to local branches of state banks to accommodate the growing demand for investment spending and wage hikes. Local banks have been responsive to this pressure partly because municipal officials appoint bank personnel and provide housing, offices, and retirement benefits for employees. Branch managers probably also assume that the central bank will ultimately provide the necessary funds if branches become overextended because Beijing does not allow banks to fail. In addition, Beijing's policy of bailing out deficit state enterprises undermines its efforts to reduce overall demand by hiking interest rates.

While decentralization of lending decisions has made it easier for local officials to interfere with monetary policy, reforms shifting the burden of financing investment from the state budget to the banking system have increased the consequences of this interference. This shift not only has reduced Beijing's direct control over the economy but has also meant that excessive growth in bank credit has a much greater impact on demand for investment goods and thus inflation.

III. Imposition of Retrenchment Measures

Faced with rising inflation and widening trade and budget deficits, Chinese leaders announced at a party plenum in September 1988 that they would postpone key market reforms for several years and implement a retrenchment program to cool the economy. In particular, Beijing shelved a price reform proposal that sparked bank runs and panic buying when it was discussed publicly in July and August 1988. In August, retail prices of vegetables and meat soared 40 to 50 percent nationwide and cost of living increases were even higher in many urban areas, according to Chinese statistics.

The retrenchment program Beijing began in September 1988 emphasized the use of administrative controls to reduce inflationary pressure. Beijing announced it would cut state investment spending by 20 percent in 1989, with the burden falling on nonproductive projects such as office buildings and recreational facilities. Although state investment actually fell only 9 percent, Beijing announced it had cancelled or postponed more than 18,000 projects, sharply cutting the value of new projects begun in 1989.

Beijing also tightened credit ceilings for domestic banks, raised reserve ratios by 1 percentage point to 13 percent, and hiked interest rates on bank loans to discourage bank-financed investment outside the state plan. Authorities also called for a halt in loans to private and rural enterprises. China's central bank also raised interest rates on household deposits—indexing those with maturities of three years or longer to the retail price index—and imposed limits on the amounts individuals could withdraw from savings accounts. To gain better control of credit acquired by local authorities through foreign channels, in early 1989 Beijing reduced the number of government entities allowed to borrow funds abroad from 100 to only 10.

Beijing expanded its direct control over raw materials, reimposing price controls for steel, copper, aluminum, and other production materials. It also reestablished its monopoly over the distribution of fertilizer, pesticides, and plastic sheeting to control speculation on farm inputs.

Chinese authorities also extended controls over trade by reducing the number of corporations authorized to import certain products and by tightening controls over foreign exchange and banning imports of some consumer goods and industrial inputs. Beijing also increased the number of exports subject to licenses, quotas, and outright bans.

The administrative measures Beijing outlined in late 1988—and its methods of ensuring local compliance—were similar to retrenchment programs implemented in the early 1980s and again in 1985 to cool the economy. In particular, central authorities tried to create a political environment in which bank managers could resist calls for loans and local officials felt compelled to defer some investment projects. Beijing exerted pressure on local leaders through the press by emphasizing that retrenchment was the party's top economic priority. Central authorities also held numerous meetings of party and government officials to lay down enforcement guidelines and sent inspection teams to localities to report on the extent of compliance with construction and credit targets. In addition, central leaders and government-controlled media touted the role of party committees in factories to make enterprises more responsive to party instructions to cut back spending.

The retrenchment program begun in 1988, however, has taken a much different course than earlier efforts because the student demonstrations in the spring of 1989, which were joined by workers disgruntled with inflation, strengthened the hand of those officials who had been critical of the pace and scope of market-oriented reforms in the 1980s and who had championed retrenchment. The removal of Zhao Ziyang as party general secretary, in particular, silenced an important advocate of balancing retrenchment with market-oriented reforms, and made it difficult for anyone to oppose austerity openly. And a central committee meeting in June 1989 elevated leaders who generally favor reform strategies that emphasize improved central planning rather than experiments with market measures.

By late summer 1989, Beijing's retrenchment program entered a new phase as China's more planning-oriented leadership stepped up calls for recentralization of economic authority to remove the underlying sources of inflationary pressure. The cornerstone of the recentralization program was a desire to reclaim planning and financial authority from local governments and municipally run enterprises. The influence of these orthodox officials was evident at the Central Committee plenum in November 1989, which approved an agenda that called for extending the retrenchment program and strengthening central planning—in part by increasing the share of production that enterprises must turn over to the government and expanding government support to large state enterprises producing energy and raw materials. Moreover, late in 1989 Beijing announced the formation of the Production Commission under the State Planning Commission to strengthen the central government's control over the economy. Fulfilling many of the functions of the State Economic Commission disbanded in late 1987 by then General Secretary Zhao Ziyang, the Production Commission is responsible for allocating capital, raw materials, transportation, and energy to key state-owned industries.

Press accounts indicate that the recentralization agenda also includes increased central control over tax revenues and investment decisions to diminish the ability of municipal officials to use local resources for their own projects. For example, the State Council announced in August 1990 a list of 23 types of investment projects that localities cannot begin without central approval, and press reports indicate Beijing plans to impose a heavy tax on all investment projects not listed in the central plan. Other press reports indicate that some officials want to reduce the scope of decisionmaking authority exercised by local bank branches and restrict the ability of specialized banks, such as the Agricultural Bank of China and the Industrial and Commercial Bank of China, to compete for business. In the fall of 1989, some senior officials called for substantially paring the number of private and rural enterprises, which have been blamed for contributing to inflation by diverting raw materials from state enterprises and using them wastefully with outdated production equipment. Some planning-oriented officials apparently also want to restrict the autonomy of state enterprise managers over personnel, salary, and production decisions.

IV. ECONOMY REELS UNDER AUSTERITY

Efforts to proceed with the retrenchment program—both its austerity and its recentralization elements—were undermined, however, by worsening economic performance late in 1989. Chinese statistics indicate that by October 1989 austerity measures were creating an economic freefall: compared to the same month a year earlier, inflation slowed to less than double digit rates, but industrial production contracted for the first time in 10 years. For the year, real GNP grew 3.9 percent, about one-third the rate in 1988; industrial output grew at less than a 1-percent rate in the fourth quarter of 1989 and was stagnant in the first quarter of 1990.

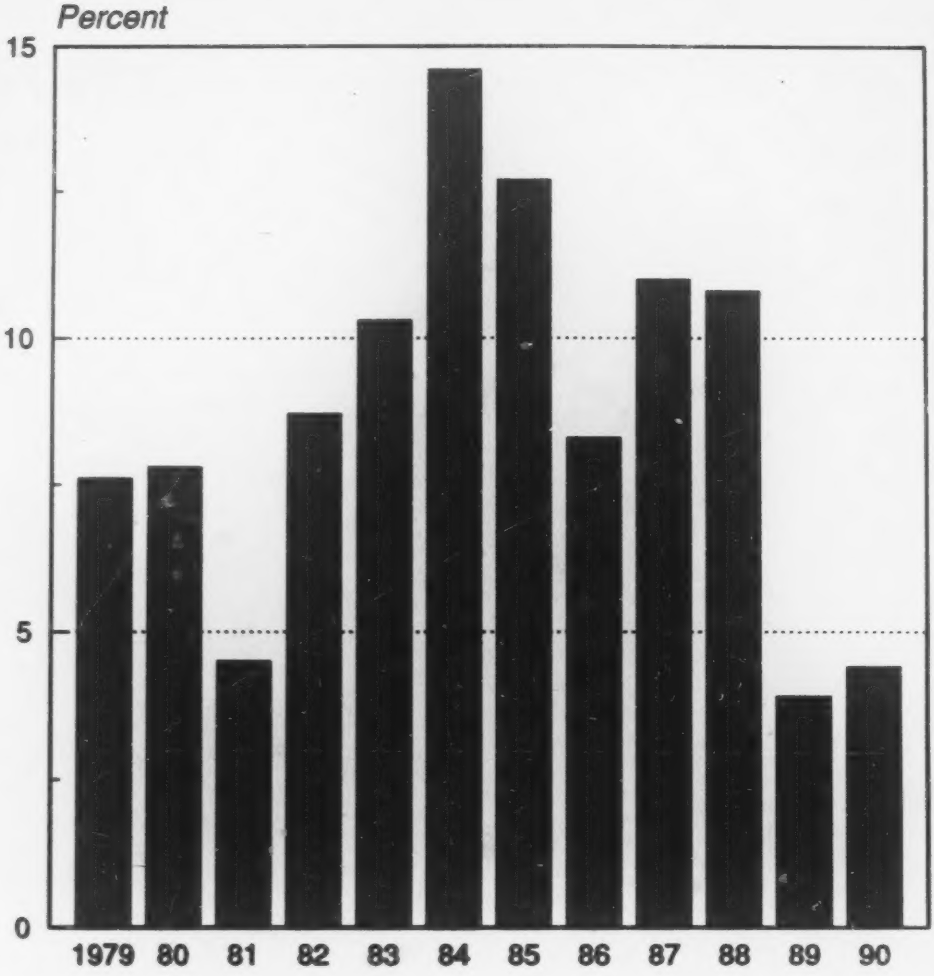
Although cutbacks in bank credit reduced inflation to low single digits by early 1990, they also caused massive debt defaults among enterprises and soaring inventories of unsold goods. Some factories, burdened with shortages of cash and excessive inventories, suspended production and laid off workers. A Chinese official admitted that at one point about one-fifth of industrial enterprises had closed; many more had significantly curtailed operations. Urban unemployment consequently reached its highest level since the early 1980s. Rural unemployment also grew because retrenchment policies that curtailed supplies of credit, raw materials, and energy to rural enterprises closed more than one million of these enterprises, and millions of rural workers employed in urban construction projects also were forced to return to the countryside because of the cutback in investment projects.

Some urban factories kept workers at the plant but paid them only 70 percent of their expected wages and no bonuses in late 1989. Real wages fell for the second consecutive year—official statistics indicate that price hikes were responsible for a drop in real income for more than one-third of urban residents. Some workers reportedly complained that the belt-tightening in late 1989 was the worst they had experienced since the early 1960s, when China was recovering from the disastrous Great Leap Forward. According to the Hong Kong press, other workers registered their displeasure by participating in work slowdowns, demonstrations, and strikes.

Not only did rising unemployment and falling living standards threaten to stoke the social discontent that anti-inflationary measures were designed to dampen, but weak industrial growth prevented government revenues from keeping pace with growing subsidies to workers and financially ailing enterprises. Consequently, Beijing's budget deficit widened further by 7 percent to 37 billion yuan ($7.1 billion) in 1989. More than 6,200 enterprises recorded losses, more than double the number in 1988. Lagging labor productivi-

Figure 3

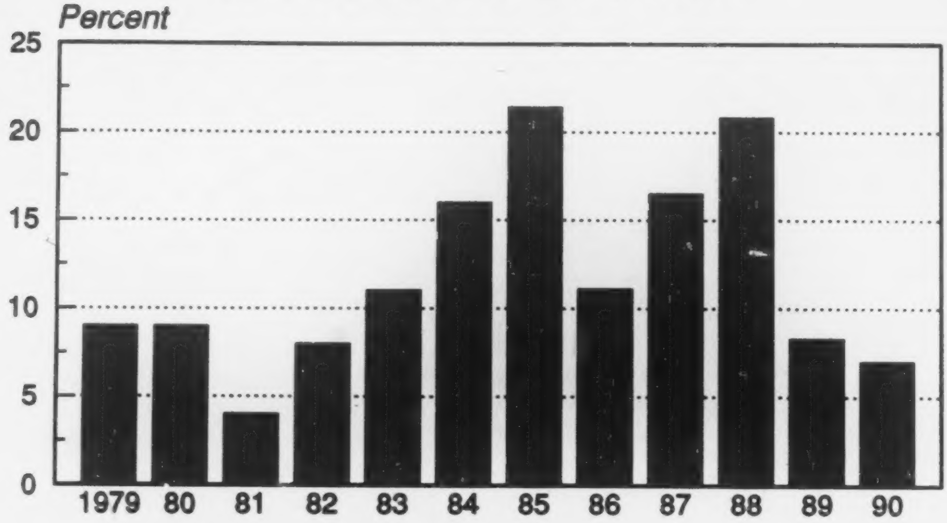
China's Real GNP Growth, 1979-90



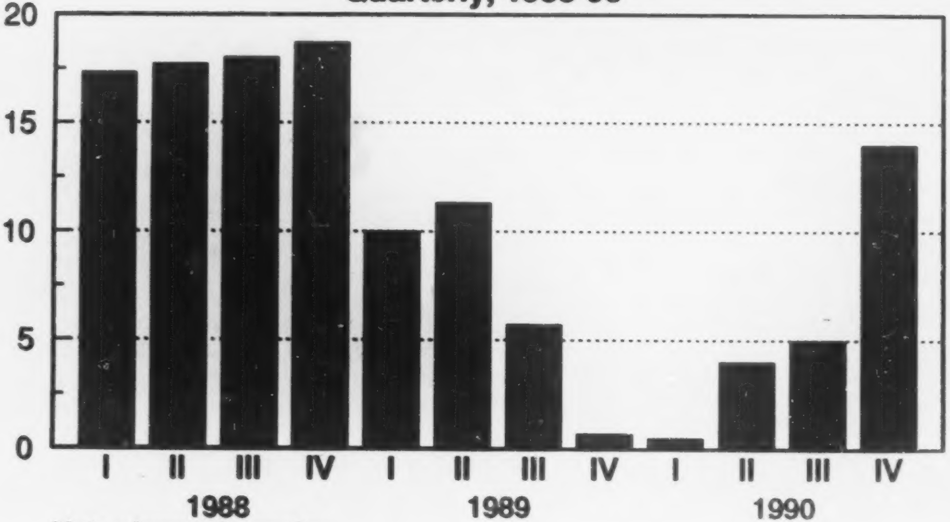
Source: Official Chinese statistics.

Figure 4

China's Industrial Growth, 1979-90



Quarterly, 1988-90



Note change in scales.
Source: Official Chinese statistics.

ty—per capita productivity grew only 1.6 percent in 1989—and rising inventories contributed to mounting production costs. The inflation-indexed bank rates for consumers made the inventory problem worse by boosting savings deposits by more than one-third to 513 billion yuan ($98.1 billion) by yearend, which accompanied an almost 8-percent real decrease in retail sales.

V. Easing the Brakes While Strengthening Central Controls

To head off additional worker unrest and ease the economic dislocations caused by retrenchment measures, Beijing began to ease up on austerity in late 1989. In the fourth quarter of 1989, the central bank disbursed new loans of 125 billion yuan ($23.9 billion), more than twice the amount released during the rest of the year and 25 billion yuan ($4.8 billion) more than planned. Early in 1990, Beijing announced it would also double to 60 billion yuan ($11.5 billion) the amount of working capital loans it planned to disburse in the first half of the year. By the end of 1990, Beijing had reportedly increased overall new lending by almost 50 percent to 273 billion yuan ($52.2 billion).

To stimulate spending, Beijing reduced interest rates on bank loans by one percentage point in March, cut rates on savings accounts in April, and lowered prices of such consumer durables as color televisions and refrigerators. Authorities also began to relax state controls over capital construction and authorized increased institutional purchases of some products. In addition, Beijing boosted price subsidies and food supplies to urban residents and ordered pay raises for all state employees.

To keep inflation from reemerging as it eased austerity, Beijing continued to emphasize expanded central control over the economy. For example, in early 1990 the Production Commission designated 234 large state enterprises to take part in a "double guarantee" program under which the government guarantees raw materials and energy inputs in return for commitments by the enterprises to turn over specified amounts of revenues and output. Moreover, Beijing targeted increases in bank credit to key state industries. In addition, Beijing tightened control over coal prices in April 1990 to dampen profiteering caused by the discrepancy between in-plan and market prices, and it recentralized allocation of some rare metals.

Beijing's efforts to "fine-tune" the retrenchment program in 1990 yielded mixed results. Industrial growth picked up moderately beginning in May, and by the fourth quarter of 1990 it had returned to double-digit annual rates. This plus a record 420 million metric ton grain harvest pushed real GNP growth up 4.4 percent. China also recorded an $8.7 billion trade surplus in 1990, continuing the turnaround that began in the second half of 1989 as tighter central controls and slower economic growth reduced demand for imports while increased subsidies and allocations of raw materials to export-producing factories helped cause exports to soar.

Although inflation remained in low single digits for much of 1990, it picked up late in the year—prices rose at a 5-percent annual rate in November. China's budget deficit also probably hit a new high. In the first half of 1990, revenues fell short of expenditures, giving Beijing a budget deficit in the first six months of the year for the first time ever. Moreover, industrial efficiency continued to lag, inventories remained high, and retail sales probably fell in real terms for the second consecutive year. By the end of 1990, one-third of all state enterprises were running deficits, according to the Chinese press.

VI. CHINA'S ECONOMIC POLICY DILEMMA

As Chinese leaders face the 1990s, they are confronted with the dilemma of how to stimulate rapid enough gains in living standards to meet the expectations spawned by a decade of rapid, reform-driven growth without reigniting inflation and widespread social unrest. In the past three years, Beijing has demonstrated that strict credit quotas and administrative controls are capable of throttling down the economy, but use of these instruments alone is not likely to provide the basis for rapid, noninflationary long-term development.

Industrial efficiency almost certainly will remain depressed if Beijing continues efforts to expand the scope of central planning because reducing managerial autonomy and forcing factories to sell more goods at relatively low, state-set prices will erode incentives. Guaranteeing large state enterprises increased state allocations of raw materials and energy will further erode incentives to boost productivity. Moreover, policies that favor China's capital-intensive industries will squeeze the dynamic nonstate sector and impede its ability to provide jobs for China's unemployed and underemployed rural workers and to produce labor-intensive goods for export. The unemployment penalty these policies exact may grow over time because Beijing must find jobs for about 100 million workers expected to enter the labor force in the next five years.

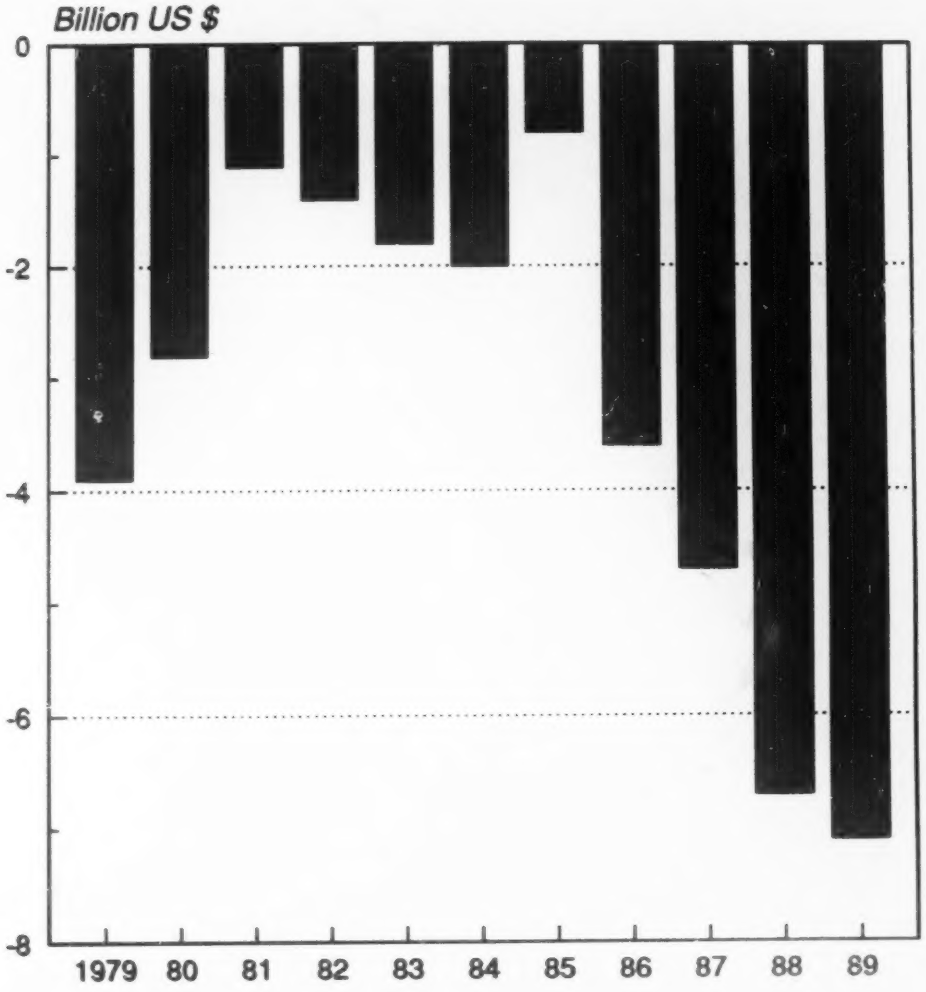
Low state-sector productivity will also make it difficult for Beijing to close its budget deficit, and pressures to speed revenue growth and stimulate state industries probably will cause Beijing to ease credit. Indeed, the larger-than-planned expansion of credit in late 1989 was partly designed to help enterprises meet their yearend tax obligations. Easier credit, however, will undermine Beijing's ability to keep inflation in check. Because China is resource rich, credit expansion will spur growth, but without market-oriented reforms, such a policy will not improve the efficiency of investment, and increased aggregate demand will worsen energy and transportation bottlenecks.

Although Beijing will try to reclaim control over tax receipts from local governments as a way of reducing the budget deficit—and its inflationary impact on the economy—it will continue to face stiff opposition from provincial officials. According to a number of Hong Kong press reports, a Central Committee plenum scheduled for the fall of 1990 to discuss a draft of China's 8th Five-Year Plan (1991–95) was delayed by two months because of wrangling over a scheme for revamping the distribution of taxes between central and local governments. When the plenum finally met, it did not publicly address the issue.

Although in the post-Tiananmen atmosphere central authorities have brought enormous political pressure to bear on local govern-

Figure 5

China's Budget Deficits, 1979-89



US $1=5.23 yuan

Source: Official Chinese statistics, adjusted according to Western accounting practices.

ments, municipal and provincial officials also have strong cards to play when they bargain for control of finances. For example, local governments control a significant share of industrial production. By 1988 nonstate enterprises produced more than one-third of China's industrial output—up from one-fifth a decade ago—and localities had gained control of many state enterprises as well. Moreover, they control important sources of raw materials; about 54 percent of coal was produced by locally run mines in 1988, and more than half of China's steel and more than four-fifths of its cement were allocated outside Beijing's central plan.

Provincial and municipal governments also are important sources of foreign exchange. The freer economic rein that Beijing has given provinces along China's southern coast is a key reason that these local governments have rapidly built up export industries and attracted foreign investment. Indeed, over the past 10 years, Guangdong Province has been the recipient of about half of the total foreign investment in China, and in 1989 it accounted for 15 percent of the country's exports. In addition, locally run firms throughout China have become important sources of foreign exchange. For example, rural enterprises in 1990 exported about $13 billion worth of goods, almost 21 percent of China's total, according to the Chinese press.

Beijing also depends on local governments to implement its policies. Almost all tax collectors, for example, are appointed and controlled by local officials. The Chinese press has cited numerous examples of local governments arbitrarily exempting enterprises from taxes or simply refusing to collect particular types of taxes.

VII. OUTLOOK FOR THE 1990S

Because Beijing will have to rely on increased credit allocations to spur growth but will probably not be able to reclaim the financial authority it lost during the 1980s, China's economy is likely to experience boom and bust economic cycles in the 1990s. Beijing is likely to clamp down hard when inflation approaches double-digit levels, so the expansion phase of the cycle may be shorter than in the 1980s. Indeed, some officials are advocating low growth targets, probably because they realize China's macroeconomic instruments are blunt and they do not have a good idea how sensitive overall demand is to changes in credit and state investment spending. Thus they prefer to err on the side of caution. They may also be concerned that the high level of personal savings deposits could accentuate a surge in prices if people withdraw money en masse to purchase consumer durables when inflation picks up.

The economic dislocations caused by retrenchment policies will provide reform advocates opportunities to advance proposals for modest new experiments. The need to fund the growing budget deficit, for example, probably helped win approval recently for the opening of several securities markets and plans to link bond markets in several cities. Hikes in state coal prices in August 1990, an almost 10-percent devaluation of China's currency in November, and discussions of possible hikes in retail grain prices have all been linked to the need to curtail government subsidies. Beijing may have missed its best chance to implement meaningful price reform, however, by not doing it in late 1989 at the trough of the macroeconomic cycle.

The prospects for a return to comprehensive, market-oriented reforms appear dim in the near term, however, despite the inefficiencies and long-term problems inherent in the current planning-oriented, slow-growth approach. Reform momentum began to slow as early as January 1987 when Hu Yaobang was ousted as party general secretary. The sharp inflation in 1988 and massive demonstrations in 1989 underscored the authorities' determination to weigh economic policies according to their potential impact on social stability.

Efforts to fine-tune retrenchment policies further in the next few years are likely to be based on this cautious attitude. Although many in the leadership endorse the primacy of central planning for China's economy, they do not want to return to Maoist-style ideological strictures. For example, they endorse basing economic decisions on objective criteria, including cost-benefit analysis, and requiring that even mandatory planning takes account of supply and demand—thus they support increases in state-set prices of key raw materials. They also favor responsibility systems in industry, agriculture, and foreign trade that hold decisionmakers accountable for profitability, and they endorse the use of economic incentives to guide factories to meet plan targets.

Their agenda also calls for increasing productive capacity through technological transformation of existing facilities, rather than building new factories or importing whole plants. Moreover, they advocate giving priority in investment to agriculture, energy, transportation, communication, and export-oriented projects, and improving the quality of factory decisionmaking by educating managers and allowing scientists and engineers to play a larger role. In addition, they support the importation of technology and capital from Western countries.

There are valuable lessons to be drawn from the experiences of the past three years. Unlike many reforming socialist economies, China demonstrated the will and ability to dampen inflation, at least temporarily. Controls over the trade sector and export promotion policies, moreover, helped push China's foreign exchange reserves up to a healthy $27 billion by the end of 1990. At least for now, this lessens the chance that China's foreign debt will be a burden on development and provides a cushion for any future market experiments. The leadership's commitment to boosting exports during retrenchment will tie China even closer to the global economy; the pressure to keep up with China's market-oriented East Asian neighbors, particularly for foreign investment, may give reformers additional motives for reducing inefficient central planning. The rush by municipal leaders to protect local economies from retrenchment policies by raising internal barriers to trade, moreover, has increased the need for, and the potential gains from, creating national resource and commodity markets. Thus should a less risk-averse leadership gain the reins of government, a return to comprehensive reforms should be possible in the future.

THE CYCLICAL FUTURE OF CHINA'S ECONOMIC REFORMS

By Albert Keidel *

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I. INTRODUCTION

At mid-year 1990, China's reforms and economic future depend on resolving the conflict between price reform and urban subsidies. Initially, price reform creates the need for direct financing of urban subsidies. Ultimately it forces a sharp reduction in subsidies, if not their complete elimination. Such an adverse impact on urban lifestyles inevitably leads to popular resentment—so much so that urban irritation at the inflation and unemployment resulting from price reform was almost certainly a cause of the 1989 Tiananmen uprising.

But there are ways to resolve the price-subsidy conflict. Overall, the best way may be to make good use of the economic cycles of expansion and contraction that have characterized Chinese reforms since their beginning. Periods of inflationary expansion have been best suited for broadening price reform, investing in new jobs, and introducing controversial taxes. Periods of contraction and austerity, on the other hand, can help convince urban workers that layoffs are necessary and push enterprise managers to cut costs, restructure their labor force, economize on urban investments, and reduce subsidies.

China—socialist China—will have economic cycles whether it wants them or not, but it should avoid the extremes of panic infla-

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tion and protracted unemployment. Economic cycles should not be allowed to disrupt reforms by stalling critical stages. It is likely, even without price reform, that China's economy will still grow and prosper in many ways. But its successes will be limited, and its instabilities will be increasingly difficult to manage. If, however, China applies economic cycles themselves to the solution of its urban price reform problems, it could accomplish fundamental reform and at the same time contain cyclical exaggerations.

Economic ups and downs have plagued China since the start of Communist rule, but they were largely political until after 1978, when economic reforms and the introduction of markets induced alternating phases of inflation and financial austerity. These cycles became increasingly intense in the latter 1980s, as financial reforms and the role of market credit eroded central government control over the economy and forced a confrontation between fundamental reform and life-as-usual for state enterprises and for the part of China's urban population that is officially subsidized.

At the time economic reforms began—and by overall Chinese standards—the subsidized portion of China's urban population had grown accustomed to a life with relatively high consumption levels. This standard of living was financed by the Maoist price system. Low prices for rural products and relatively high prices for manufactures generated large urban profits that both financed industrial investment and sustained a privileged urban lifestyle.

Deng Xiaoping's economic reforms, however, introduced higher food prices and two-tiered markets for other rural products such as fuel and construction materials. With the spread of these price reforms in the 1980s, the officially subsidized urban standard of living and large state investment programs became difficult to finance. China's leaders could not rely as much on rural-urban financial transfers through the old price system. Instead, they resorted to government budget deficits and easy bank credit to pay for state-enterprise investments and to sustain urban expectations for a modern life. This monetary accommodation of weak taxes and low urban productivity led to cycles of inflation and fiscal contraction which, in turn, led directly to the Tiananmen uprising of 1989.

By 1990, the two most promising solutions to long-term price reform problems are to raise urban state-sector labor productivity and to introduce direct taxes on the non-state-sector economies. A third route, deficits and inflation, will ultimately fail to accomplish thorough price reform. No monetary, fiscal, or price-system manipulations can avoid the harsh reality that reforms have cut transfers from the rural economy and that real urban consumption levels are higher than justified by the lower productivity of urban workers.

But neither raising productivity nor introducing new taxes is politically attractive. In the rural economy, direct farm and township taxes would be an even more odious transfer of rural wealth to the cities than the old Maoist price system has been. For the cities, raising productivity would mean job changes, layoffs, new jobs from more labor-intensive investments, and management reliance on business cost-effectiveness rather than promoting enthusiasm for selecting technology. Many of these changes would contradict popular urban beliefs that socialism in China means job comfort and security, and that socialist industrialization means heavy investment in an increasingly capital-intensive high-technology productive capacity. The necessities of reform therefore risk arousing the opposition and indignation of urban workers, intellectuals, and communist cadre alike.

The well-timed use of economic cycles can reduce the adverse political impact of urban layoffs, harder work, price reform, and new taxes. This is because economic cycles combine practical policies with matching adjustments in citizen expectations. For example, popular resistance to layoffs and job hunting is weakened if bankruptcy and financial reorganization are enforced during a well-publicized cyclical downturn. Credit restrictions encourage managers to cut out costly and unnecessary equipment and where possible substitute less-expensive labor.

On the other hand, during periods of cyclical economic expansion, new jobs and growing revenues can relieve unemployment and help make higher prices appear more affordable. At the same time, expanding sales can make new or stiffer taxes appear less burdensome than they ultimately will be. Above all, increasing urban productivity requires the new jobs and large investments common during economic booms. Chinese policymakers must therefore learn to manage China's economic cycles so as to avoid the protracted phases of investment stagnation common in the recent past.

Whether or not China solves its basic economic problem of high state-sector consumption and low state-sector productivity, the system reforms in the 1990s appear certain to strengthen the role of most domestic markets and open China even further to the world economic community. Without fundamental price reform, however, the resulting market economy will be twisted and crippled in significant ways, and economic growth will not achieve its potential. Without the painful adjustments to urban expectations and productivity necessary for urban price reform, much of the dynamism in China's economy will remain in rural areas, townships, and smaller cities. Repeated bouts of inflation and state budget crises will generate growing resentment over the government's crude efforts to finance state enterprise subsidies and expensive state investments. If, however, China can make major adjustments in state enterprise productivity through layoffs, new jobs, and more efficient investment design and construction, urban state enterprises could lead the way in developing China's economic growth potential and increasing the industrial sophistication.

In either case, China's economy in the 1990s will grow impressively as an exporter of manufactures and an importer of technology. But if urban labor and management reforms succeed, the economy will be better integrated into a relatively effective national market in most goods and services. Otherwise, China's state-subsidized cities will become barricaded prisons of economic inefficiency, holding the much more competitive non-state economy at bay by means of a hated taxing authority, restrictions on the scope of the non-state economy, and inflationary state finances.

II. CHINA'S CYCLICAL ECONOMIC PAST

China's economy has been subject to two types of cyclical influence. One kind of cycle is political and has been based on the timing of Communist Party congresses and major national leadership decisions. In the political cycle, new alignments in the Communist Party Central Committee and major leadership shifts have for decades initiated economic instabilities. The other kind of cycle is economic and only became significant in the 1980s under Deng Xiaoping. In the economic cycle, each phase—whether liberalization or renewed financial austerity—has generated economic conditions that by their nature prompt yet another policy shift, leading to the next phase. For example, inflation has generally triggered financial and investment cut-backs, while austerity cash flow problems have triggered spending relaxation. In the 1980s, both political and economic cycles operated, but the economic cycle became increasingly exaggerated and disruptive, especially as financial reforms matured in 1986–88.

Chinese scholars and policymakers have long been aware of political influences on China's economic instability and refer to as many as seven politically induced investment cycles in China's economy since 1953, including the Great Leap Forward of 1958 (the second cycle), the 1966–70 early years of the Cultural Revolution (the fourth cycle), the 1978–80 years of heavy investment following Mao's death (the sixth cycle), and the continuing investment expansion begun in 1982. Most of these cycles are identified either with a particular Party Plenum in which Mao exercised his accumulated power, or with a particular National Congress of the Communist Party, as in 1973 (the Tenth Party Congress), 1977 (the Eleventh), and 1982 (the Twelfth Party Congress, which initiated the long boom of the 1980s).

The economic cycles of the 1980s, however, have been shorter than the political cycles, and they are measured differently. China's political cycles have traditionally been identified from annual data on State investment spending, uncorrected for inflation. But annual data are too aggregate to capture the more frequent economic cycles, especially in the latter 1980s when their periodicity shortened. The economic cycles of the 1980s are instead best measured with monthly statistics on industrial output, corrected for the influence of seasonal variations. Seasonally adjusted data are presented in Tables 1 and 2.

Seasonality in monthly Chinese industrial output means that, even when there is no change in policy or underlying conditions, output from one month to the next can change dramatically because of regular annual shifts in weather and the timing of official output targets. For example, relative to the average output level over many months, June output is on average 9 percent higher than normal every year, while July and August output levels are roughly 5 percent below the average. This is because weather in June is good, and production activity is more intense in order to fulfill mid-year plan targets. In July and August, however, the weather is extremely hot in most of China, and the work pace is more relaxed. Similarly, industrial output in November and December is 3-to-5 percentage points higher than the actual trend in order to meet annual targets. Then in either January or February, output is roughly 12 percent below trend, depending on when Chinese New Year happens to fall. Because of such strong seasonality, measuring month-to-month growth rates from raw data makes it virtually impossible to tell how much of the variation is due to seasonality and how much is due to actual shifts in the underlying growth of industrial output.

While it is essential to correct for seasonality, some corrections are not very satisfactory. The Chinese way of reporting monthly growth rates does correct for seasonality in its own way, but it introduces other inaccuracies, which for China in the 1980s were quite serious. Chinese official monthly growth rates correct for seasonality by comparing a month with the same month in the previous year. Since the month is being compared to itself one year earlier, there is no need to change the data for seasonality; the influence of seasonality is the same for the same month in each year. But this methodology, because it spans a whole year, also includes change during the other eleven months preceding the month under analysis. When these months experience rapid monthly ups and downs, as in China's case, the measure no longer reflects only growth for the month of concern. For example, if there were a sharp downturn in the first half of a 12-month period followed by a strong recovery in the second half, even though industry was growing again at a fast pace, the official Chinese growth rate for the twelfth month could show slow or even negative growth. This is because, given the slump earlier in the year, output for the month under analysis might not be significantly different from what it had been a year earlier.

In other words, the official way of measuring monthly growth really calculates an average of monthly growth rates over the whole preceding year. This helps to understand the second major problem with the official way of calculating monthly growth rates—a shift in the growth trend may not appear in official growth data until as much as three or four months after it has begun. If policymakers rely only on these statistics, they will be unaware of new trends and will be slow in adjusting policy. For example, if after twelve months of rapid growth the industrial economy suddenly turns downward, output for many months will still be much higher than it had been twelve months earlier, and so the official growth rate will show strong industrial growth for many months, when in fact industry is in a decline. Government policymakers would be wrong to think that their austerity program had not yet taken hold.

This problem of timing in official data can be seen in Table I for the period January 1988 to June 1990. The seasonally adjusted data in the second column show what really happened to industrial output during this important period. The country experienced strong expansion and a financial and banking crisis (January–October 1988), an initial austerity program (November 1988–February 1989), a recovery through the Tiananmen uprising (March–May, 1989), a sustained second austerity program (after the June 4 army crackdown), and finally a recovery in industrial output (beginning in March 1990). The first column shows that official data blurred

Table 1
Chinese Monthly* Industrial Output, 1988-90
Comparison of Official and Seasonally Adjusted Growth Rates
(Percent growth*, on an Annual Basis)

		"Official"	Seasonally Adjusted
1988	Jan	15.4**	20.6
	Feb	16.7**	12.7
	Mar	14.6	9.3
	Apr	17.2	27.8
	May	17.9	28.6
	Jun	17.7	36.6
	Jul	15.5	6.3
	Aug	20.1	19.1
	Sep	20.2	30.7
	Oct	20.4	31.8
	Nov	17.9	-1.2
	Dec	18.3	5.5
1989	Jan	8.1	-31.6
	Feb	11.3***	-5.8
	Mar	14.8	23.1
	Apr	13.7	44.2
	May	11.1	14.6
	Jun	8.8	7.8
	Jul	9.5	-2.3
	Aug	6.1	-2.9
	Sep	0.9	-13.7
	Oct	-2.1	-15.7
	Nov	0.9	-5.4
	Dec	3.4	29.7
1990	Jan	1.7**	-27.4
	Feb	-2.7**	-29.0
	Mar	1.1	25.4
	Apr	1.8	60.0
	May	4.6	48.9
	Jun	5.7	29.6
	Jul	2.9	-8.4

*Note: Right-hand column growth rates are based on seasonally adjusted real output levels and are calculated as the average monthly growth for a given month relative to the average output of the three previous months. Hence, the measure is really a two-month average growth rate, converted to an annual basis. This growth rate measure is sensitive to changes in the month in question, but less sensitive to an anomalous change in one of the three preceding months.

**Note: These "official" data for January and February have been corrected for an irregularity in the incidence of the Chinese New Year Festival. Because of the large drop in output associated with the Festival, if it falls in February one year and January the next, or vice versa, comparisons with the previous year are distorted for both January and February. The "official" data for January and February 1988 and 1990 have been corrected for this distortion. As officially published, the data for January and February, respectively, were 25.0% and 11.4% for 1988 and -6.1% and 5.6% for 1990. "Official" data above for other months are as presented by official government publications, with the exception of February 1989.

***Note: As officially published, this February 1989 growth rate was 7.5%, which is too low, because 1988 was a leap-year, and its February had 29 days rather than 28, causing it to produce more and making 1989's official growth rate appear too low by comparison. The "official" data above are based on average daily output for each month.

Sources: See Table 2.

these trends, and in each case reported the onset of a new period to begin two to four months later than it actually had.

Continuing the analysis of Table 1, official data make it appear that the 1988–89 austerity program never had a very serious impact, when in fact output growth was flat by November 1988. Similarly, official data show negligible growth in the spring of 1990, when in fact output was recovering strongly after February (though most of the output increase was accumulating in inventories). Perhaps most important, these data for winter–spring 1988–89 are consistent with leadership indecision and disagreement about the austerity program. In any event, it should be clear from these examples that in order to study China's economic cycles in the 1980s, one must use seasonally adjusted month-to-month data rather than officially calculated growth rates.

Table 2 presents seasonally adjusted month-to-month industrial growth rates for ten years, from mid-1980 to mid-1990, and describes the many sharp variations in China's industrial economic performance in the 1980s. In general, there have been five obvious major industrial cycles in economic activity, with a number of more minor ups and downs in between. The five major industrial slumps were in the periods September 1980 to February 1981, January to September 1982, June to November 1985, November 1988 to February 1989, and July 1989 to February 1990. The last two slumps are often thought of as one long austerity program, but these data show that there was a significant recovery surge just at the time of the Tiananmen uprising.

Inflation and money growth trends, not shown here, correspond quite closely with these industrial cycles and became increasingly exaggerated in the latter 1980s. While inflation remained low for the first half of the 1980s, there was an inflationary surge in 1984–85 and then an extremely serious inflationary crisis in 1988. Similarly, while money growth fluctuated somewhat before 1984, beginning in that year large increases in loans and circulating cash alternated with strong cutbacks in the money supply. In most cases, the major shifts in industrial output lagged behind money supply changes by about a quarter-year, and the shifts in money supply became increasingly exaggerated, with the most extreme money supply increase coming in the first half of 1988.

Combining all these factors, it is apparent that economic cycles of expansion and contraction became increasingly important in China as reforms matured in the 1980s. Their periodicity, averaging just over two years, was shorter than the political cycles tied to National Communist Party congresses, which tend to meet every five years. What is more, the economic cycles can usually be identified with well-publicized policies to control inflation or inject liquidity into the economy. For example, the slump of 1980 corresponds to Deng Xiaoping's initial readjustment program to control the inflation and budget deficits associated with rural price reform, fighting in Vietnam, and Hua Guofeng's aborted Ten-Year Mini-Leap Forward. The cyclical shifts in 1981–83 were not as well publicized, but the 1984–85 expansion was the direct result of the introduction of China's urban reform program in October 1984 and the preparatory banking reforms earlier that year. The contraction in late 1985 was a highly visible program to control inflation and over-heated investment, although official statistics based on calculations over the previous year generally (and erroneously) show the slowdown to have occurred in early 1986. The rapid recovery in early 1986 was the direct result of the state banking system's response to complaints from state enterprises of serious cash shortages, which financial data show resulted in a direct infusion of new money into enterprise accounts.

Also in 1986 financial reforms moved from an experimental stage to implementation throughout much of the country, enabling a variety of new and less-closely supervised financial institutions to make loans and collect deposits, often in cooperation with provincial and county officials. The subsequent growth surge triggered official attempts to curb overheated investment. The results of these efforts can be seen in the slower growth rates both at the beginning and at the end of 1987.

The mild downturn at the end of 1987 is particularly interesting, because it represented an effort to limit money growth for all of 1987–88, an effort that failed spectacularly as China's 1988 money supply grew at record rates and brought such high inflation that panic buying, hoarding, and runs on state banks created the worst financial crisis in the history of the PRC. This crisis, in turn, prompted the contraction visible in the data for late 1988 and early 1989, a well-publicized austerity program that included the introduction of high interest rates and the cancelation or postponement of most state construction programs. The resulting unemployment among construction workers became so serious by March 1989, however, that growth was resumed in March–May 1989, despite public policy statements that austerity would continue. The June military crackdown suppressing demonstrations also marked a renewed austerity program that extended into 1990; the program finally succeeded in reducing inflation to negligible levels.

The most important lesson in these data is China's inability to avoid economic cycles, in large part because of its ineffective macroeconomic policy tools. China's markets and financial systems are too new and unpredictable to allow fine tuning of investment and price trends. This lesson became clearer when financial reforms in 1986–87 decentralized the economic system even further, forcing the government to accelerate its reactions to unfavorable economic shifts. One of the sources of policy instability was the absence of fundamental price reform. Successful price reforms themselves, however, must be a result and not a cause of successful reforms in other dimensions, especially in the tax system, the structure of urban labor, the productivity of urban state workers, and the pace and productivity of urban state investment.

III. URBAN PRODUCTIVITY: FUNDAMENTAL PRICE REFORM IMPEDIMENT

In many critical ways, price reform is the essential ingredient in most other economic reforms. Without price reforms, managers and bankers cannot base decisions on profitability and meet social needs at the same time. Without price reform, bankruptcy and labor reallocation may easily do more damage than good; and liberalized exports and imports could generate warped trade patterns

Table 2
Chinese Industry
Seasonally Adjusted Monthly Growth Rates, 1980-1990
(Percent Month-to-Month Growth on an Annual Basis)

1980	Jun	14.7
	Jul	18.2
	Aug	5.0
	Sep	-8.7
	Oct	-17.7
	Nov	2.6
	Dec	-7.1
1981	Jan	-7.1
	Feb	-5.9
	Mar	12.1
	Apr	2.3
	May	12.0
	Jun	11.2
	Jul	14.4
	Aug	19.2
	Sep	15.9
	Oct	22.9
	Nov	24.2
	Dec	18.4
1982	Jan	-5.9
	Feb	9.7
	Mar	6.3
	Apr	-7.4
	May	-6.7
	Jun	-5.1
	Jul	7.2
	Aug	1.4
	Sep	3.6
	Oct	11.4
	Nov	21.5
	Dec	50.8
1983	Jan	13.1
	Feb	-2.3
	Mar	-0.5
	Apr	8.5
	May	12.7
	Jun	9.5
	Jul	9.0
	Aug	10.5
	Sep	21.6
1983	Oct	19.0
	Nov	17.0
	Dec	-16.3
1984	Jan	6.0
	Feb	21.8
	Mar	24.8
	Apr	10.3
	May	14.1
	Jun	5.3
	Jul	26.8
	Aug	24.3
	Sep	29.3
	Oct	23.3
	Nov	28.1
	Dec	8.8
1985	Jan	50.5
	Feb	62.9
	Mar	14.9
	Apr	13.7
	May	5.6
	Jun	-1.2
	Jul	10.2
	Aug	-2.6
	Sep	-16.9
	Oct	-14.4
	Nov	-6.5
	Dec	14.4
1986	Jan	26.3
	Feb	10.9
	Mar	20.4
	Apr	10.7
	May	12.9
	Jun	15.7
	Jul	12.0
	Aug	15.7
	Sep	16.1
	Oct	25.4
	Nov	22.7
	Dec	23.0
1987	Jan	8.6
1987	Feb	-3.9
	Mar	11.3
	Apr	17.1
	May	17.6
	Jun	29.3
	Jul	19.0
	Aug	11.6
	Sep	12.1
	Oct	17.0
	Nov	7.5
	Dec	12.1
1988	Jan	20.6
	Feb	12.7
	Mar	9.3
	Apr	27.8
	May	28.6
	Jun	36.6
	Jul	6.8
	Aug	19.1
	Sep	30.7
	Oct	31.8
	Nov	-1.2
	Dec	5.5
1989	Jan	-31.6
	Feb	-5.8
	Mar	23.1
	Apr	44.2
	May	14.6
	Jun	7.8
	Jul	-2.3
	Aug	-2.9
	Sep	-13.7
	Oct	-15.7
	Nov	-5.4
	Dec	29.7
1990	Jan	-27.4
	Feb	-29.0
	Mar	25.4
	Apr	60.0
	May	48.9
	Jun	29.6
	Jul	-8.4

Note: Underlying data are monthly flows adjusted for seasonal variation and number of days per month. The growth measure used is calculated as the average monthly increase in one month's output over the average output for the three preceding months. Hence, strictly speaking, the measure is a bi-monthly growth rate. This measure reduces the double variation which occurs with straight month-to-month growth rates, under which one month's sharp variation affects growth rates for both preceding and following months. For a further explanation of seasonal adjustments, see Table 1 and the text.

Sources: Rock Creek Research, Inc. Data Banks. Calculated from data in PRC State Statistical Bureau Monthly Statistical Bulletin, various issues and Economic Information & Agency China Economic News, various issues.

harmful to China's long-term growth. But in China, price reform itself is delayed by the government's inability to finance the large urban subsidies that successful price reforms would require. This is because for decades those urban subsidies have been financed by the gap or "scissors" between low prices for rural goods and high prices for urban manufactures. By correcting this gap, price reforms cut off revenues for urban projects and incomes.

Casual analysis of delays in China's price reform assumes that China's leaders do not understand the importance of price reform and resist it because of an ideological preference for central planning. But there is evidence that this is not the case. On numerous occasions in the 1980s, Chinese policies introduced price reform, in sectors as important and diverse as foods, construction materials, and energy. In virtually every case the reforms were slowed or stopped because the new cost structure made it impossible to finance urban standards of living and urban investment. The subsidies and costs overwhelmed the combined financial capacities of the state budget and state banking system.

Most fundamentally, price reforms threatened the subsidized urban standard of living enjoyed by the 20 percent of China's population legally registered to live in cities as state and collective employees. Put in the simplest terms, if production and consumption are valued at reasonable prices, China's privileged urban population has not earned its own keep. Over the decades, urban state enterprises had added workers but had not made corresponding increases in output and quality of product. Similarly, by the end of the 1970s, the extra output generated by an additional Chinese yuan of investment had fallen to all-time historical lows.

The comparison of rural and urban standards of living is complicated by the various Chinese definitions of who is rural and who is urban. Traditionally, registered urban residents enjoyed special privileges and subsidies. By the end of the 1980s, official statistics reported that 52 percent of China's population lived in cities and towns—a misleading figure implying that the urban population increased by over 350 million in less than 8 years. (See Banister's chapter in this volume). In fact, only 20 percent of the total population was registered by the Public Security Ministry as being "nonagricultural," a designation left over from the early Maoist period, when China's population was formally divided into two groups, those who lived on rural communes and those who lived in cities. Even though, by mid-1990, a large portion of the so-called "agricultural" population is employed in nonfarm rural and urban industries and services, the official "agricultural" and "nonagricultural" distinction still determines which households receive state subsidies for food, fuel, housing, health care, and education, in addition to being guaranteed jobs for life in state enterprises and urban collectives.

Under the Maoist price system, the privileged "nonagricultural" urban standard of living was financed by legislating low prices for rural products and high prices for urban industrial output. Although much of the profit generated in this way was used to finance state investments, a significant portion also went to subsidizing the standard of living of urban residents, including students, so that at least in its cities, China could point to the success of socialism in providing a better life for workers. This "price scissors" rural revenue transfer was thus formalized under Mao. Strict controls on rural-urban migration also ensured that rural-urban income differentials did not result in the growth of shanty towns and urban slums so common in other parts of the world. In this way, although the Maoist price system may not have seemed "rational" or market-determined, it was originally based on a logical scheme to raise funds for investment in rapid industrialization. Its serious drawback was that, over time, the lack of competition and individual incentives in both rural and urban areas allowed productivity in both sectors to stagnate and in some cases decline.

Implementing fundamental price reform under these circumstances leaves China with only three policy alternatives. None of them is politically attractive. Either solution by itself is doomed to ultimate failure, but a combination of the three has a good chance of success. The first solution is to introduce price reform and then implement a direct tax on the rural economy equivalent to the loss in profits and revenues due to price reform. An explicit tax could replace all the financial transfers implicit in the old price system, but such a large tax would not only be extremely unpopular and difficult to collect, it would weaken incentives originally strengthened by the price reform and turn the government into an omnipresent and unpopular landlord. It is true that a direct and more effective national tax system is needed and would help solve the problem, but by itself it could not sufficiently support price reform.

The second policy alternative is to implement price reform but maintain urban subsidies by running state budget deficits and borrowing from an acquiescent banking system willing to postpone repayment obligations indefinitely. This alternative is the default if all else fails, and was in fact used by China in 1985 and 1988, but it leads to inflation, urban unrest, and ultimate erosion of whatever benefits had accrued from the original price reform. Just as for taxation, there is a role for slightly inflationary monetary policy, especially to maximize investment and job creation, but easy money by itself will fail.

The third alternative solution to the subsidy problem is to increase dramatically the productivity of the urban labor force and the productivity of large urban investments, while limiting growth of urban consumption levels. This third alternative attacks the heart of the problem, but is the most difficult politically, because it requires major disruptions to the accustomed urban standard of living. Raising urban productivity requires a restructuring of the urban labor force, job changes, layoffs, and significant investment in new jobs—preferably more labor-intensive jobs. But layoffs and more demanding jobs seem to contradict the promise of Chinese urban socialism, which, if anything, has been understood to mean job security.

The Tiananmen uprising of 1989 revealed the seriousness of the urban population's opposition to the impact of price reform. A quick examination of student demands and worker support for the demonstrations reveals that economic factors stimulated the uprising. The most substantive of the students' "Seven Demands" called for prosecution of corruption, better pay for intellectuals, and punishment of officials responsible for the 1988 inflationary crisis. These demands were complemented by worker efforts to form independent labor unions. In contrast, noneconomic demands for freedom, democracy, recognition of student patriotism, rehabilitation of Hu Yaobang, an end to press censorship, and redress for police brutality were ardent and sincere but were in a sense tactical demands that sought to enhance the political effectiveness of government opponents.

At the time of the 1989 Tiananmen uprising, many students and intellectuals feared—erroneously, it seems—that the austerity program begun in 1988 and reemphasized in early 1989 policy statements was really a cover for the reversal of reforms by conservative leaders. Even though a recovery in industrial output growth had begun by the start of student demonstrations in April, official data had not yet shown the trend (see Table 1). Furthermore, the 1988-89 austerity program had left hundreds of thousands of rural construction workers unemployed. In March and April of 1989 hundreds of thousands of these workers began moving to the cities to look for jobs. Their presence was an implicit threat to the security of jobs in state enterprises and urban collectives.

It is ironic that while students and workers were avowedly proreform, their demands for improved conditions ran counter to the inevitable short-term impact of reforms, especially price reforms. Corruption was an important issue because urban residents felt that just when they were being forced to sacrifice in the austerity program, officials were getting rich from selling state-quota goods on the higher-priced second-tier markets. Corruption thus symbolized urban citizen sacrifices during the austerity program. Complaints about inflation and low salaries for intellectuals were complaints about the eroding privileged urban standard of living. And yet, in order for price reform to work, there would have to be inflation; real urban incomes would probably have to fall temporarily; and job security would have to be compromised. The Tiananmen uprising of 1989 illustrates the ground swell of urban resentment brought on by the ineveitable consequences of price reform.

The fundamental problem of price reform, then, is intimately related to the political, social, and even psychological dimensions of economic change. If China fails to introduce price reform in the 1990s its economy will shudder and stumble along under the heavy burden of police control over a rebellious nonstate economy. And yet, full implementation of price reform requires a strong and disciplined government hand to the throttle. There are deeply felt urban beliefs which hold that maintenance of a safe and comfortable urban way of life is the true test of China's commitment to socialism. The government's job in forcing unpopular changes can be made easier if their necessity and inevitablity can be made obvious to those most affected. To this end, China's economic cycles, rather than representing policy failure, can become a vehicle for policy success.

IV. Using Economic Cycles to Implement Economic Reforms

China's economic cycles consist of an expansion phase and a contraction phase—a boom and a bust. Each phase of the cycle can be used to promote parts of China's reform program that are incompatible with reforms more suited for another phase. In many dimensions, the difficulties or exaggerated problems associated with reforms in one phase can be adjusted or corrected in the next phase. But most important, the signs of trouble or difficulty in one phase can help convince the public and policymakers alike that additional reform steps are necessary, which are naturally associated with the succeeding phase of the cycle.

The clearest example of the use of cycles is also the most important for price reform. Price reform is by definition the adjustment of relative prices; it is promoted when some prices change but others do not. Because most prices are more easily raised than lowered, inflationary periods during which some prices go up much more than others is a natural mechanism for price reform. But price reform is also made easier when the labor force is adjusted to meet post-reform needs for higher labor productivity. Major reforms that shift prices closer to their market values leave inefficient state firms with low revenues and high labor costs. In the sense that these labor costs need to be reduced, the layoffs and job changes usually associated with an industrial recession are also an essential part of price reform. But inflation and layoffs are difficult to implement together. Instead, inflationary price adjustments have best occurred in the expansionary phase of China's economic cycle, while layoffs and job changes are more easily enforced during an economic downturn, when workers are aware of economy-wide bankruptcies and revenue shortfalls. Just such cyclical forces have been very effective throughout muct of the 1980s in China's nonstate sectors, especially for village and township industry.

Cyclical implementation can benefit other reforms as well. In the case of financial reforms, new bank and credit facilities can expand and experiment during a cyclical expansion, while in a period of credit discipline, government supervision and macroeconomic control can improve. For foreign trade, periods of credit expansion facilitate experiments in decentralized management of imports and foreign exchange, while during the cycle's contraction phase the government can strengthen indirect controls and correct any damage to its international balance of payments. Finally, cyclical liberalization of the economy also allows for the periodic correction of social consequences to reform which appear to undermine socialist principles and Communist Party authority. Overall, reforms in 1990 have a serious public relations problem, and the judicious use of economic cycles, while avoiding extremes of inflation or unemployment, promise one of the best mechanisms for advancing fundamental system change.

The rhythm of economic cycles also takes advantage of the natural element of forgetfulness on the part of both the urban population and policy-makers. At the height of an inflationary expansion phase, popular opinion is quick to believe that slower economic growth and even significant unemployment are an acceptable burden to bear if only inflation can be controlled. In the depths of the downturn phase, on the other hand, it often seems to many that some resurgence of inflation is not too high a price to pay if only investment and employment growth could pick up. Rational anticipation of such policy swings in a poor economy like China's has insignificant influence on their economic consequences. In fact, just such a dynamic of forgetfulness was common in China in the latter 1980s. In the inflationary periods of 1985 and 1988, the clear priority was to control rapid price rises, even if austerity meant higher employment and cash flow problems. In 1986 and early 1990, however, the seriousness of the asuterity recession encouraged the popular opinion that economic expansion and further price reform would be worth some inflationary risk.

Economic cycles cannot of course solve all the problems of economic reform. The evolution of legal systems, commercial institutions, social security programs, unemployment insurance, management skills, and regulatory sophistication require a slow and gradual process of training, experimentation, and legislative initiative. These take time. But none of them can successfully evolve without the concurrent introduction of price reform, and price reform often comes quickly. Economic cycles not only ease the social impact of price and labor reform, they also draw out the process of price and labor reform, allowing other slower reforms to mature.

Most important, an awareness of economic cycles and of their usefulness for reforms can help avoid the danger of serious instability. If policymakers continue to stimulate the economy when an expansionary phase is already well along, the resulting inflation and overheated investment will provoke hoarding, weaken financial institutions, and encourage conservative opposition to the entire reform program. Conversely, if the austerity program in a cycle's contraction phase is further tightened when inflation is already starting to come down, the resulting unemployment, liquidity crises, and slow wage growth will exaggerate labor dissatisfation, delay new hires, and threaten social unrest. Furthermore, the proper timing of counter-cyclical policy shifts first requires an adequate understanding of what is happening to the economy. Policymakers need seasonally adjusted month-to-month data to track the cycle accurately, followed by early intervention to ensure that cyclical extremes do not reach damaging proportoins. China's economic cycles will not disappear in the 1990s, but how China uses them to complement the needs of price reforms and other economic initiatives will largely determine the nature of China's economy at the end of the century.

V. Alternatives for China's Economic Future

China's economic future faces two realistic economic alternatives: one with successful price reforms and one without. In any event, while there is virtually no possibility that China will return to a system like the centrally planned economy of the Maoist era, large state enterprises and investment programs will remain prominent parts of China's economy well into the next century, even as markets expand and dominate numerous sectors. Markets and market forces will coexist with state enterprises, and state market forces will coexist with state enterprises and state investment projects, but the degree to which they will support one another will depend on price reform. If fundamental price reform is introduced early in the 1990s, then by the year 2000 China's state sector will become successfully integrated into the rest of the national economy. In that case, real GNP growth for most of the decade could average as high as 7–9 percent a year. If, however, price reform continues to stall and the productivity of urban state enterprises stagnates, then the privileged urban population and priority state projects will continue to depend on large state subsidies. The government's efforts to finance those subsidies will lead to large budget deficits, inflation, growth surplus, and increasingly unpopular taxes on farms and nonstate enterprises, with growing corruption throughout the country. Cadres at all levels will come under pressure in their jobs to deliver rural and township revenues to the state and to police nonstate economic activity so it does not compete directly with the state sector. These cadres increasingly will be exposed to temptations for bribery and favoritism. Under these conditions, inflation in the 1990s will be high and seemingly insoluble. Economic growth will be throttled by repetitive austerity campaigns and average no more than 4 to 6 percent.

Whichever course China takes, economic cycles will be important for understanding the overall trend. Both kinds of cycles—political and economic—will be relevant. For example, the next Communist Party congress, probably sometime late in 1992, will be important for setting the pace of reforms and economic growth in 1993–95. What is more, to the degree that reformers in the government try to influence the outcome of the Congress in a pro-reform way, they will do their best to suppress unwanted side effects of reforms in 1991–92.

In the 1991-1992 period before the 1992 Party Congress, China's pro-reform leaders should make every effort to limit inflation, eliminate budget deficits, run a foreign trade surplus, reduce crime, and maximize grain output. These are sensitive economic issues for the swing factions of the Communist Party congress, which will determine the makeup of the new Central Committee. Just such political preparations were observed in 1987. The anti-bourgeois liberalization campaign that year saved economic reforms. Its severity placated worried delegates and reassured them that reforms did not threaten party authority or social stability. To casual observers of conservative steps in 1992, therefore, it might appear that China's economic reforms are suffering a setback, but when seen in the context of the upcoming Party Congress, such conservative policies can be interpreted as part of the preparation for fundamental reforms later in the decade.

Shorter-term econmic cycles will also be important in the 1990s, as policymakers react to economic events that are not completely in their control. Inflationary expansions will prompt austerity programs to cut back on excess demand. Conversely, periods of credit contraction, unemployment, and state enterprise cash flow problems will prompt infusions of new credit and stimulate lower interest rates and revitalization of state investment projects. The important issue is whether these shorter-term economic cycles will be copled with state-sector layoffs and new investments to raise labor productivity. If austerity programs force unemployment in the state sector and are then followed with new investment to absorb the redundant labor, the burden of subsidies will gradually decline and market forces will play an ever larger role in the nationwide economy. But if austerity policies aimed at controlling inflation also continue to guarantee all state jobs, then subsidies will grow, become increasingly difficult to finance, and lead China's econmy into an era of bitter rivalry between a protected state enterprise sector and a relatively independent but constricted nonstate economy based in smaller cities, town and rural areas.

INFLATION IN CHINA: PATTERNS, CAUSES AND CURES

By Barry Naughton *

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China underwent an inflationary crisis during 1988–89 that shook the foundations of its political and economic system. Inflation jeopardized the economic reform process and fueled popular discontent, thereby contributing to the political crisis that culminated at Tiananmen Square on June 4, 1989. High inflation occurred in spite of repeated expressions by the Chinese leadership of their determination to hold inflation rates below 10%, and in spite of traumatic historical experience with inflation. China had experienced hyperinflation in the 1940s, and two years of serious inflation in the early 1960s, following the collapse of the Great Leap Forward. The prolonged price stability China then experienced between the mid-1960s and 1978 seemed to demonstrate a profound aversion to inflation on the part of policymakers, reinforced by the fact that most of the urban population lived on fixed incomes diffi-

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cult to adjust in the face of inflation. These factors failed to prevent the collapse of macroeconomic discipline during the late 1980s.

This article first reviews the patterns of inflation in China over the past ten years. Stressing that prices have changed at different rates in different sectors, consumer prices and prices of industrial and investment goods are treated separately. Economic consequences of the inflation in different sectors are briefly described. A discussion of the causes of inflation follows. It is stressed that some price increases are needed to accommodate price rationalization; but that the economy has also been plagued with continuing problems of weak and inconsistent monetary policy. A few measures that would lead to modest improvement in China's anti-inflation effort conclude the paper.

I. Patterns of Inflation and Their Measurement

China has many different inflation rates. Chinese markets are segmented, and different kinds and degrees of control are exerted over prices and purchases in different parts of the economy. Moreover, the legacy of forty years of government-price controls affects different sectors in markedly different ways. As a result, prices of different kinds of commodities have changed at very different rates over the past ten years. The Chinese environment can be contrasted with the situation in market economies where markets are linked together by the ability of producers and consumers to substitute freely between different goods according to relative prices, and where markets can generally be presumed to be in equilibrium. Even in full market economies, prices of different goods can change at different rates, as the experience with energy prices in the 1970s and 1980s testifies. But it remains meaningful to speak of a basic inflation rate, which is approximately equal to the rate of increase in wages minus the increase in labor productivity.

In China, it is doubtful whether it is possible to speak meaningfully of a single rate of inflation. Price trends for urban and rural consumer goods, industrial products, and building services have all diverged sharply at different periods. As economic reform has progressed, segmentation between different sectors of the economy has decreased, and there may be a tendency for inflation rates in some sectors to converge. Until now, though, different sectors have displayed different inflation rates not simply because of differential changes in productivity and wages, but also because of changing relations between sectors in the national economy. Finally, Chinese price data are of uneven quality; some areas are well served, but information is quite inadequate in others.

However, it is possible to make some meaningful generalizations about inflation in China. There have been two clear periods since 1978. From 1978 through the end of 1984, overall inflation was modest. From 1985 through 1988, inflation was sharply higher, regardless of which sector or indicator we examine. During the first period, in spite of the overall low rate of inflation, prices of nonstaple food, mining products, and construction grew at moderately rapid rates, in the range of 5 to 10% annually. Prices of manufactured consumer goods were stable or declined. Evidence is much weaker for prices of industrial materials and machinery, but they seem to have grown at intermediate rates, around 3–5% annually. There was therefore some realignment of prices, and real incomes grew rapidly given moderate inflation overall. During the second period, inflation accelerated across the board. Driven at first, during 1985, by increasing food prices, by the end of the period, in 1988, the price of everything was increasing rapidly. Changes in relative prices were swamped by the overall rise in the price level. Rapid inflation eroded nominal increases in income, and brought real income gains for the entire 1985–89 period virtually to zero.

II. Consumer Goods

Consumer price inflation was moderate through 1984, notwithstanding a brief spurt of prices during 1979–80. Since 1985, inflation has been consistently high, and it accelerated sharply during 1988. In the final quarter of 1988, government policy shifted to emphasize halting inflation, and inflation has in fact been brought down sharply, marking the end of the second period. Annual rates of increase of several important consumer price indexes are shown in Table 1. The urban consumer price index (CPI) is covered first, and the relationship between this and other measures of inflation is discussed later.

Table 1: Increase in Major Consumer Price Indexes

	Annual Percentage Increase			
	Urban CPI	Retail	Nonstaple Food	Farmers Market
1978	0.7	0.7	2.2	-6.6
1979	1.9	2.0	3.5	-5.1
1980	7.5	6.0	14.1	2.0
1981	2.5	2.4	3.2	5.8
1982	2.0	1.9	-0.2	3.3
1983	2.0	1.5	4.6	4.2
1984	2.7	2.8	6.0	-0.4
1985	11.9	8.8	23.0	17.2
1986	7.0	6.0	8.3	8.1
1987	8.8	7.3	14.9	16.3
1988	20.7	18.5	31.1	31.9
1989	16.3	17.8	13.8	10.8
Jan-June 90	1.5	3.0	0.2	-5.5

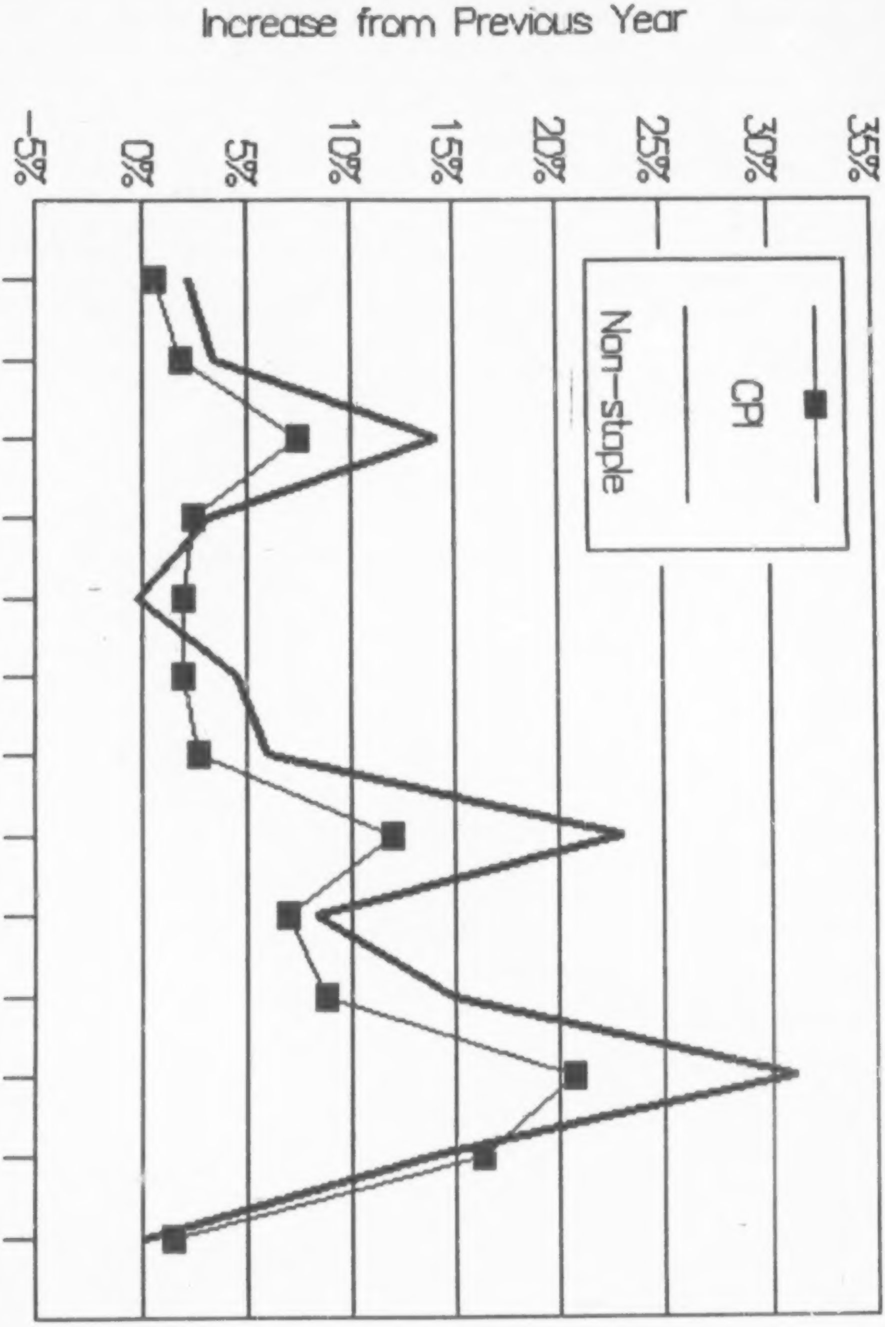
The most important part of consumer price inflation has been the increasing cost of food. Urban food grains are subsidized and supplied by the government at a strictly controlled price, but the cost of other food items has skyrocketed. The most important of these "nonstaple" foods are vegetables, poultry, eggs, and meat. Over the entire 1978–1989 period, the price of nonstaple food items more than tripled, driving a doubling of the overall urban price level. Food prices grew rapidly during both post–1978 periods. Between 1978 and 1984, the urban CPI increased by a cumulative 20%, while urban nonstaple food prices increased by 35%. From 1984 through 1989 inflation accelerated, but the relationship between increases in the overall price level and in food prices stayed roughly constant. The 1989 urban CPI was 83% higher than that in 1984, but urban nonstaple food prices were 128% higher. Only in late 1989-early 1990 did food prices fall below overall inflation due to the drastic deflationary policies that cut into real household income.

Figure 1 shows that there have been three bursts of inflation in the past ten years, and each has been marked by a rapid growth in nonstaple food prices. In 1979–80, 1985, and 1988, large increases in nonstaple food prices paced increases in the overall price level. During the entire period, a steadily increasing proportion of nonstaple foods has been provided through the free market. As a result, increases in nonstaple food prices can be decomposed into two elements: (1) increases in the price charged by state commercial outlets, and (2) an increase in the proportion purchased at higher priced free markets. During each of the bursts of food inflation, the government increased the price of food at state commercial outlets, and simultaneously compensated state employees by increasing their wages. In 1979 and 1985, those wage increases permitted most urban employees to stay ahead of inflation, but in 1988, modest wage adjustments were soon swamped by accelerating inflation.

Table 1 shows the increase in average nonstaple food prices for urban residents (Column 3) and the change in prices in urban farmers' markets (Column 4). The farmers' market price index is usually translated into English as the "market price index," but this is misleading. The index covers only goods sold by farmers, and in urban areas ninety-five percent of these are food products. The index thus covers only one segment, although an important one, of consumption goods. From Table 1, it can be seen that farmers' market prices increased more slowly than overall nonstaple food prices through 1985, actually declining in 1978 and 1979. Thus the increase in state prices gradually decreased the gap between state and market prices. According to official Chinese figures, market prices were 69% above state prices in 1978, but only 28% higher in 1985. Since 1986, state prices have been close to farmers' market prices, particularly when quality differentials are taken into account. Moreover, the farmers' market and overall nonstaple food prices now move closely together, reflecting the fact that urban residents are increasingly dependent on the farmers' market for their nonstaple food purchases.

The increase in the cost of food is particularly important, because Chinese households spend an exceptionally large proportion

FIGURE 1. URBAN CONSUMER PRICES, CPI AND NONSTAPLE FOODS, 1978 TO FIRST HALF OF 1990.



of their income on food. More than half of urban household expenditures are for food, and nonstaple food items account for more than 30% of total outlays (see Table 2). There are two reasons for the large weight of food in total consumption spending. First, because China is a low income country, households spend a larger proportion of income on food than in a rich country (the relationship economists call Engel's law). Second, because the prices of many other items are controlled at a very low level, a larger proportion of money outlays goes to nonstaple foods. The most obvious examples of low, controlled prices are rent, transportation, medical care, and staple grains. Control of rent and public service prices reinforces Engel's law, and gives Chinese consumers an extraordinarily large share of nonstaple food in household budgets. Since consumers are concerned about the prices of things they actually spend money on, this large budget share makes increases in the price of food a particularly sensitive issue. (The same factors were at work in Poland under the Communist government there).

Table 2: Structure of Urban Household Outlays

Unit: Percent

	1982	1988
Food	58.7	51.4
Of Which:		
(Staple Grain)	(12.9)	(6.9)
(Non-Staple Foods)	(32.1)	(31.4)
of which: [Fresh Vegetables]	[6.2]	[6.4]
of which: [Pork]	[8.4]	[7.6]
Clothing	14.4	13.9
Durable Goods	6.4	12.9
Other Goods	8.4	7.4
Rent, Utilities, Fuel & Transport	5.9	4.0

Sources: 1989 TJNJ, pp. 727, 728, 713; Urban Household Survey.

A brief review of the changes in the structure of urban household expenditures between 1982 and 1988 can tell a great deal about the impact of inflation and also clarify the relationship between different consumer price indices. The major changes, displayed in Table 2, were the decline in the share of staple grain, the big increase in the share of consumer durables, and the continuing moderate decline in the share of rent and public utilities. The share of consumer durables is increasing because urban households are buying many more consumer durables, which have had stable or declining prices except during the panic buying of 1988. The share of staple grain and public utilities, on the other hand, is declining because prices of these items (and quantity available) remain tightly controlled by the government, while income is rising.

Nonstaple foods have a stable share, but this stability reflects the offsetting effects of two different factors. Increasing incomes have tended to raise demand for food products, but non-staple foods prices have increased more rapidly that other items, causing consumers to substitute into other goods. While urban consumers spend the same proportion of their rising incomes on vegetables and pork, they are not actually consuming any more of these items. Indeed, the household surveys actually indicate that per capita consumption of vegetables and pork declined slightly between 1982 and 1988. By contrast, consumers are spending the same share of their incomes on clothing and other goods, but the prices of these items have grown relatively slowly, and consumers are consuming more. Overall, urban residents are better off because they have more durable goods, more clothing and miscellaneous goods, and more housing. However, inflation has prevented them from upgrading their diets in the way they would have preferred.

In the urban consumer price index, changes in the price of individual goods are weighted according to the actual importance of those goods in urban household outlays. Those weights are determined from annual household surveys, and the index can be checked for logical consistency: the urban consumer price index is quite reliable. The other main price index, the overall index of retail prices (Column 2 of Table 1), is less useful, because the different components are weighted according to their importance in total retail sales, rather than their importance in household outlays. Rural residents purchase very little nonstaple food—they grow about one-half of the food they consume—so the retail price index gives less importance to food prices, the most rapidly growing component of prices. Indeed, the State Statistical Bureau doesn't even bother to collect prices of vegetables sold in rural areas. In most years the retail price index grows more slowly than the urban consumer price index, and it cannot be used to deflate household income, either for urban or rural households. The urban consumer price index is therefore the best index of the rate of inflation faced by Chinese households. Moreover, its overall rate of increase is quite consistent with the dramatic increase in price of certain of its components, such as fresh vegetables.

The most important consequence of consumer price inflation is the impact on real household income. The rapid inflation in 1988–89 caused a significant reduction in real household income for the first time since the beginning of reform in 1978. Table 3 shows changes in real urban wages and rural per capita incomes. Urban wages increased from 1978 through 1980, and then stagnated until 1983. They then increased by 33% between 1983 and 1986. After

1986, the real urban wage stagnated, then declined by about 5% in 1989. Real rural incomes cannot be calculated with the same degree of precision, because it is unclear how farm-grown food is treated in Chinese statistics. However, we can deflate nominal rural income by the retail price index for consumer goods sold in rural areas through 1987, and the rural consumer price index after 1988, and we derive the real income series in Table 3. Rural incomes grew steadily and rapidly from 1978 through 1985. The calculation may overstate the rate of increase, but the growth of income is so large that more accurate figures would undoubtedly leave substantial real growth. After 1985, however, rapid rural income growth ceased, and in 1989, real incomes declined 9% from the previous year. The acceleration of inflation through 1988-89 clearly halted the growth of real incomes that had marked the reform era generally, and eroded the income gains made by city-dwellers in 1985-86.

TABLE 3. Trends in Real Incomes, 1985 = 100

	Rural per capita income	Average urban wage
1978	41	72
1979	49	77
1980	55	81
1981	62	80
1982	74	81
1983	85	83
1984	96	95
1985	100	100
1986	100	108
1987	103	109
1988	104	108
1989	95	103

If only food prices were increasing, then all of the inflation would be the result of changes in relative prices. Since it is generally recognized that the relative price of food must be raised, this would indicate that the inflation, although painful, was serving a useful economic purpose. Table 4 shows the increase in nonstaple food prices alongside the increase in price of the component of consumer prices with the lowest inflation rate (durables or daily-use items). It can be seen that through 1986, prices were generally stable for the items with the minimum inflation rate. Indeed, through 1984, prices of these items were actually declining slightly. This indicates that through 1986, nearly all the inflation experienced was an inescapable cost of the necessary realignment of relative prices. Indeed, throughout this early period, the Chinese government devoted substantial effort to matching price increases with offsetting price reductions. This effort succeeded in maintaining a low inflation rate, but at the cost of an overall slow pace of economic change. Even the simplest realignment of prices strained Chinese administrative capabilities and required elaborate political compromises before adoption.

From 1987, the relative price stability of non-food items began to change. In 1988-89, even the slowest growing component of the consumer price index increased by 13-14%. This can be taken as a

Table 4: Change in Relative Prices

	Annual Percentage Change	
	Increase in Price of Slowest Growing CPI Component	Increase in Nonstaple Food Prices
1978	0.0	2.2
1979	-0.6	3.5
1980	-4.5	14.1
1981	-2.0	3.2
1982	-2.9	-0.2
1983	-2.2	4.6
1984	-0.1	6.0
1985	1.2	23.0
1986	0.7	8.3
1987	3.2	14.9
1988	12.9	31.1
1989	14.3	13.8

Source: 1989 TJNJ, p. 691, 1990 TJZY, p. 38.

rough measure of the amount of "excess inflation" during those years. This is the amount of inflation that did not contribute anything to realignment of relative prices. The same rationalization of prices could in theory have occurred with an overall inflation rate that was thirteen or fourteen percentage points lower.

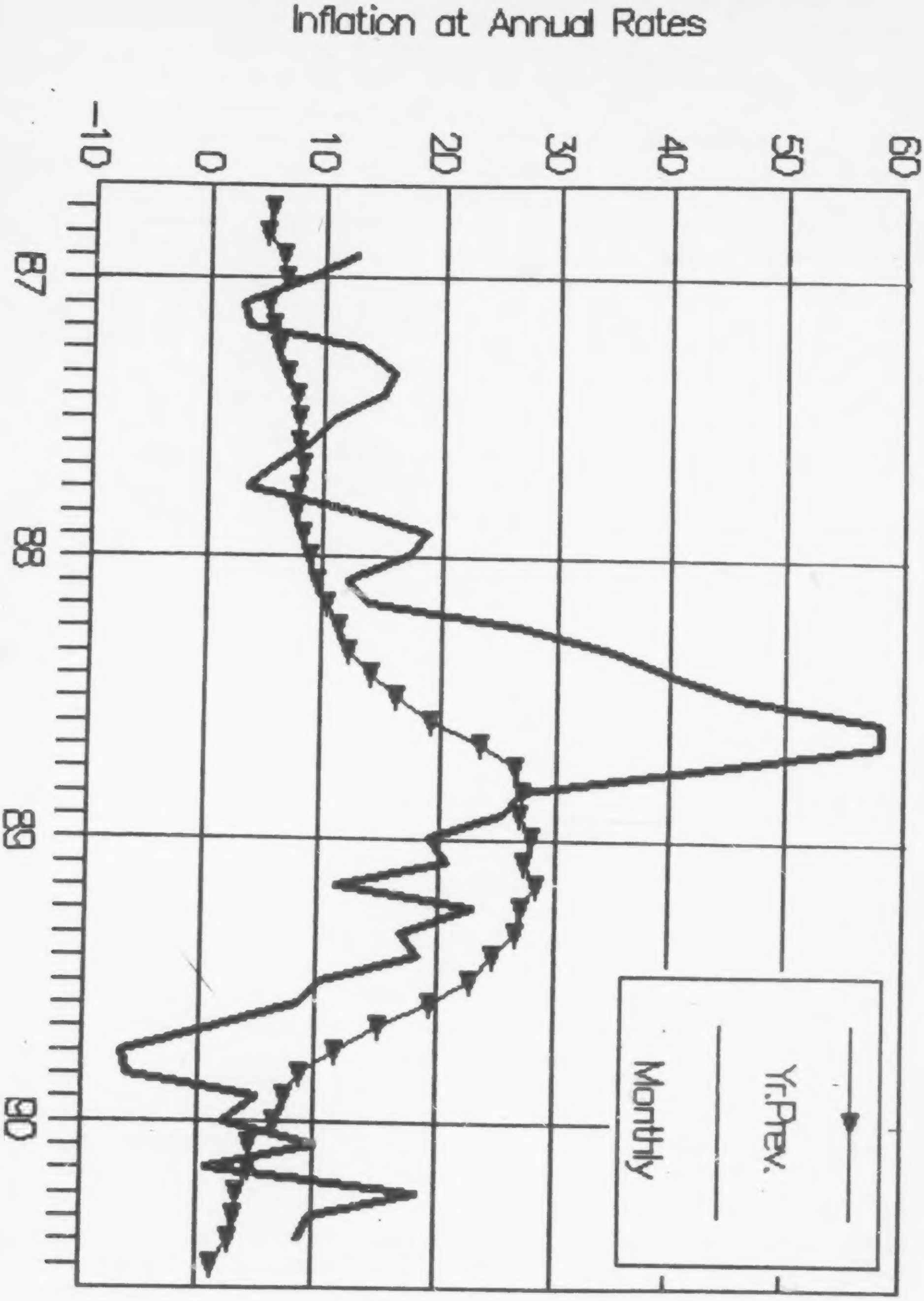
The increasing price of food in relation to manufactured goods such as textiles and consumer durables has significantly altered Chinese price relationships, bringing them more in line with world prices, and reducing the degree of discrimination against agriculture. At the same time, however, the overall price level has risen while the prices of staple grains, housing, and social services have remained almost constant. Yet all of these had historically been controlled at extremely low levels, and they needed to be increased relative to other prices. Thus, while there has been some price "reform" in the area of nonstaple foods, the reverse has occurred in relation to these other goods, and price relations that were already distorted have become even more distorted.

The foregoing discussion helps to show how different the inflationary experience of 1988–89 was from the rest of the reform period. The crisis of 1988 was really an unprecedented collapse of macroeconomic stability. (For a detailed account, see Naughton, 1989). The unique characteristics of the 1988 episode emerge even more clearly when we examine monthly inflation rates. In order to do this, Chinese monthly price data must be converted into an internationally comparable form. Chinese publications always compare the price level in a given month with the price level in the same month one year previously. By contrast, in the United States, the price level in a given month is compared with the previous month, and the change is then seasonally adjusted and expressed as an annual rate. The Chinese inflation figure is thus actually the sum of twelve successive month to month increases, and the most recent monthly increase is averaged in with the eleven previous ones to get the annual rate. The U.S. index is extremely sensitive to changes in a given month, while the Chinese index, as published, smooths over individual monthly changes and seems to present a picture of very gradual rise and fall in the consumer price index. Figure Two shows graphically both the official Chinese consumer price index and a recalculation based on those figures that shows monthly changes. (The monthly changes have been slightly smoothed by computing moving averages over three months, in order to minimize the effect of errors in the recalculation procedure.) This conversion allows the characteristics of the 1988-89 experience to stand out clearly.

China experienced a burst of hyperinflation in the summer of 1988. Consumer price inflation was gradually accelerating during the first part of 1988, and prices in the farmers' markets—the least controlled sector of the economy—had been accelerating since 1987. In the spring of 1988, state prices for several nonstaple foods were also increased, and Deng Xiaoping announced that comprehensive price reform would be attempted soon. In the context of growing inflationary pressures, this announcement proved to be exceptionally ill timed. Inflationary expectations among the population were dramatically confirmed, with serious consequences. Individuals began to engage in speculative buying, purchasing whatever they could before prices increased, while enterprises abandoned whatever price restraint they had been exercising in order to position themselves for the coming price reform. As a result, prices exploded during the summer of 1988. For three months, prices were increasing at more than a 50% annual rate, the traditional definition of hyperinflation.

This was an economic crisis that compelled a radical response. In September 1988, policy shifted dramatically to stress fighting inflation. Renewed subsidies and price controls were directed at the most volatile component of consumer prices, vegetables and meat. Controls on investment and enterprise outlays were enacted, and strict quotas on bank lending put in place. These measures quickly ended the hyperinflationary episode, bringing the monthly inflation rate down to approximately its pre-crisis levels. Still, persistent inflation in the 20% range continued until June 1989. After June, contractionary policies were intensified, and the measures begun nine months earlier began to take effect. During the second half of 1989, inflation was brought to a halt, and prices were actually falling for a brief period. As of June 1990, prices were beginning to rise again. Ironically, even though prices were now increasing, the official Chinese inflation index continued to decline and

FIGURE 2. NATIONAL CONSUMER PRICE INDEX, YEAR PREVIOUS AND MONTHLY INCREASE, SEPTEMBER 1986 TO JUNE 1990.



reached its lowest level in years. This was because it was now averaging in the affects of falling prices during late 1989.

One final element of China's consumer price inflation needs to be considered, and that is the regional dimension. Inflationary pressures have rippled out from Guangdong province, where prices have been pushed up by vigorous economic growth and the growing influence of international prices on Guangdong's increasingly open economy. Guangdong's consumer price increase was by far the highest in China with a cumulative increase over the 1978–89 period of 286%. However, the impact was felt beyond provincial borders, and prices increased more than 240% in a ring of provinces around Guangdong, including Hunan, Guangxi, Fujian, and Zhejiang. The impact was also felt Guizhou and Sichuan, where prices increased by 227–230%. These were the only provinces where prices increased at a rate more than five percentage points above the national average (219%). Besides the direct impact of the booming Guangdong economy, higher inflation in these provinces may also be associated with a more progressive attitude toward reform which has resulted in fewer efforts by provincial governments to control prices. The North China plain experienced below average inflation: with the exception of Beijing, inflation in all the north China provinces ran at least five percentage points below the national average. The lowest cumulative inflation, 191%, was recorded in Tianjin.

III. PRODUCERS GOODS AND THE COST OF INVESTMENT

Inflation has also affected the cost of investment and industrial producers goods. However, while we can be reasonably confident of the accuracy of the urban consumer price index, there is no comparable measure of inflation in the sphere of producers goods. The situation is extremely complex: most industrial producers' goods have two prices, a lower state-set price and a higher market price. Information about the proportion of goods sold at differing prices is fragmentary and difficult to interpret. Additional complexity comes from the fact that many goods are sold at prices in-between plan and market prices, either because of informal controls on ex-factory prices, or because factories exchange lower priced output for access to inputs at similar concessionary prices. In spite of this complexity, it is possible to sketch the main outlines of change. But because methodologies used to compute the numbers that follow are not known, it is difficult to judge the reliability of indexes, and no individual numbers should be taken too seriously. However, the results that follow represent the best efforts of Chinese economists, and the results are plausible.

First, there has been substantial upward adjustment of in-plan prices. Table 5 shows the annual rates of increase in plan prices of the main categories of industrial products over two fairly long periods. The structure of industrial prices bears some similarity to that of consumption goods, in that historically low prices of extractive products, such as coal, petroleum, mineral ores, and lumber, need to be raised relative to manufactured goods. Some realignment of relative prices was carried out, particularly during the period through 1985. After 1985, the rate at which planned prices increased accelerated for all categories of goods, but the differential between rates of increase shrank. Through 1985 prices of extractive materials were increasing annually 4.7% faster than manufactured goods, but this differential shrank to 2.8% in the latter period.

Table 5: Average Annual Increase in Planned Prices

	1978-85	1985-88
Extractive Industry	6.0	9.1
Materials Industry	4.2	7.4
Manufacturing	1.3	6.3

Source: Calculated from Zhang Zhuoyuan et al, p. 23, and Chen Fubao.

After 1985, the most important changes in industrial prices came because of the increasing importance of marketing outside the plan by enterprises. Formal price ceilings on outside-plan sales were removed in February 1985, and some market price data for individual commodities is available from that time. In general, market prices increased during 1985, and then leveled off for a couple of years. Market prices of some products, most notably coal, even declined somewhat between 1985 and 1986. However, wide differentials between plan and market prices remained. Typically, standardized producer goods, such as coal, cement, and ordinary steel products, sold at market prices that were about two to two and a half times plan prices.

The surge of inflationary pressures in 1988 had a severe impact on producer goods prices. Market prices had begun to increase by the beginning of 1988, and the pace of inflation accelerated through the year. General trends are summarized in Table 6. By the third quarter of 1988, a situation close to panic buying had emerged for certain commodities. Market prices of non-ferrous metals and light steel products doubled within a few months. Moreover, by the beginning of 1989, in-plan prices had also increased by 20% as producers increasingly passed on cost increases to their customers, even within the state plan. Inflation truly became a generalized problem in the Chinese economy during 1988.

The most obvious consequence of inflation of producer goods has been a steady increase in the cost of investment. Unfortunately, the Chinese do not calculate an investment goods price deflator. However, two comparisons can provide a general indication of the increase in the price of investment goods. The first is the index of construction costs, which is given in Table 7. The first index covers state-run construction companies, which only perform about one-third of the total construction work. The second index covers all

Table 6: Producer Goods Inflation

Unit: Percent Increase from Year Previous

	Within-Plan	Outside-Plan	Average
1987Q2	8.0	15.5	8.8
1988Q1	6.5	12.7	10.4
1988Q2	10.4	18.0	15.5
1988Q3	15.7	28.9	23.0
1988Q4	16.5	34.7	26.7
1989Q1	20.5	36.9	29.4
1989Q2	19.9	39.5	27.5

Sources use different methodologies that may not be completely comparable. 1987Q2 calculated from Li Lei et al; 1988Q1 through 1989Q2 from Xie and Ding.

completed construction, but it only gives the actual cost per square meter of new construction. Because it is not adjusted for quality improvements, it may overstate the degree of inflation. The two indexes are not closely correlated, especially in the early years, but both show construction costs increasing at more than 10% annually after 1985.

Construction prices are relatively difficult to control, particularly in China where much construction is performed by nonstate and rural construction teams. It is possible that prices of industrial machinery, and overall costs for large, state-sponsored projects, have been growing more slowly than overall construction costs. However, a careful study by the State Statistical Bureau of large state investment projects indicates that this is not the case. A comparison of all the large state investment projects completed during 1986–88 with those completed during 1976–80 found sustained cost increases over that period. In five sectors for which detailed comparisons were possible, average investment costs per unit of capacity in the later period were 253% of those in the earlier period, implying an average annual rate of increase of 11%. Undoubtedly this reflects a higher rate of increase during the latter part of the period. One important factor was the devaluation of the renminbi, which resulted in sharp increases in the price of imported machinery.

The rapid increase in the cost of investment implies that the real rate of growth of Chinese investment in the state-run economy has been relatively slow since the beginning of the reform period. State capital construction almost exactly tripled in nominal terms be-

Table 7: Increase in Construction Costs

	Annual Percentage Increase	
	State Owned Construction	Overall Cost Per Square Meter
1979	--	8.7
1980	--	8.8
1981	5.1	13.0
1982	2.9	5.8
1983	2.6	12.2
1984	5.8	13.3
1985	9.4	9.6
1986	10.0	12.7
1987	8.4	16.9
1988	13.8	11.5
1989	11.7	--

tween 1978 and 1988. If, however, it is true that average investment costs increased at an 11% annual rate during this period, that would imply that real state capital construction over the entire period grew at an annual rate of less than 1% per year, and total state investment (including decentralized "renovation and replacement") grew by only 4% per year. Overall investment grew faster, because collective and private investment grew at much faster rates, and it is in any case impossible to have confidence in the price deflator used. But this preliminary calculation does indicate that state investment has grown slowly, and may help explain the difficulty the government has had in completing priority investment projects.

IV. Causes of Inflation I: Changes in Relative Prices

Inflation is a monetary phenomenon, and an excessive increase in the money supply is a part of any inflationary episode. Usually, though, the money supply has been allowed to expand in order to accommodate pressures for increased prices created by increased costs in certain areas, or by an unresolved struggle between different social groups for shares of society's output. These factors are particularly important in a socialist economy undergoing economic reforms, for two reasons. First, the structure of relative prices that prevails before reform is typically highly distorted, so that liberalization of the economy creates large changes in prices and corresponding large pressure on costs of certain kinds of products. Second, these changes in relative prices have a big impact on the distribution of income between different social groups.

These two factors can both be easily linked to the characteristic of China's consumer price inflation. As described above, the most characteristic feature has been the more rapid increase in food prices relative to other consumer prices. Low food prices before reform are clearly related to one of the most fundamental characteristics of China's economy: by keeping food and other agricultural prices low, China's leaders kept wage and material costs low for industry. The high profits in industry that resulted from this policy were the primary source of government revenues, and were in turn channelled into the industrialization effort. Rural dwellers paid almost no direct taxes: instead they were taxed indirectly through the low prices paid for their output. Clearly, for China to move to a more market-oriented economy, food prices will have to rise relative to the price of industrial products. Moreover, this change in relative prices will tend to make farmers better off relative to urban dwellers, unless the government enacts other offsetting policies. Difficult political and economic issues are involved in these changes.

When we bring this perspective to bear on the choice of monetary policy, we can see that the government must attempt to resolve a very difficult question: To what extent should the money supply, and therefore the overall price level, be allowed to increase in order to accommodate the higher price of food? It is often accepted in market economies that prices are relatively inflexible downward. That is, although producers are willing to increase prices or maintain them unchanged, they are relatively unwilling to lower them. If this is strictly true, then relative prices can only be changed as part of an inflationary process: some prices will remain unchanged, while the now more costly item will increase in price, resulting in a higher price level overall. This dilemma faced Western policymakers during the 1970s oil crises: if the relative price of energy was to increase, would it be better to keep monetary policy unchanged, thus forcing some prices to decline (at the cost of a recession); or to allow oil prices to increase sharply while increasing demand enough to allow other goods to be sold at their original prices (at the cost of inflation)? Chinese prices are even less flexible downward than prices in a market economy, because government price fixing remains significant in many sectors of the economy. Therefore, presumably Chinese planners should accommodate at least a portion of the increased food prices, allowing the overall price level to rise.

In fact, Chinese policymakers have followed two very different policies on this issue. Until the third quarter of 1984, total credit (and therefore total money supply) grew at modest rates (See Table

8).[1] Extremely conservative about inflation, policy-makers during this period were unwilling to accommodate the gradual increase in agricultural prices. Instead, as shown in Table 4, from 1980 through 1983 they tried to make other prices downwardly flexible by administrative command. Unavoidable price increases in agricultural products were generally matched by price reductions of some industrial product, most obviously when the price of cotton fabrics was increased and the price of synthetic fabrics reduced at the same time. This policy kept the rate of inflation down, but the pace of change was simply too slow. Virtually every individual price change required the approval of the Premier. The magnitude of necessary changes was simply too great, and the political and administrative capabilities of the Chinese government too limited, to permit an adequate adjustment of prices with minimal inflation.

The rate of credit creation accelerated dramatically at the end of 1984 (See Table 8). Between the end of the third quarter in 1984 and the end of the third quarter in 1988, credit grew at well over 20% annually. Rapid growth of credit had the effect of fully accommodating food price increases and stimulating more rapid economic growth. From Table 4, it can be seen that a really dramatic realignment in the relative price of food occurred in 1985 through 1987. Moreover, GNP growth accelerated to over 10% annually. However, these results were purchased at substantial cost. Excess demand conditions were created throughout the economy, and repeated attempts to control them failed, as discussed below. As excess demand conditions spread through the economy, the new inflationary environment described above became established and erupted explosively during 1988. Policy shifted from being too conservative before 1984, to being too expansionary after 1984. A steady middle course would have been preferable.

Up to this point the focus of this paper has been on food prices to examine the tension between the needs of price realignments and the desire for price stability because it is in this area that the past experience in price changes has been most manifest. But note that, even within the sphere of consumer prices, food is not the only such item. Housing and fuel prices are important prices that have been maintained at excessively low levels, and staple grains have always been excluded from food price adjustments. Indeed, it is probable that most of the necessary adjustment of nonstaple food prices has already taken place. While there are still a range of subsidies on nonstaple foods (varying greatly from locality to locality) that need to be removed, these are relatively modest overall. However, there has been virtually no reform of housing, fuel, or grain prices, and we might expect changes here to take center stage in the future.

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[1] The largest extension of credit comes annually during the fourth quarter, in order to finance agricultural procurement. Since this is the most important component of credit policy, and it has a lag effect throughout the entire economy, monetary policy decisions implemented during the fourth quarter of each year dominate economic conditions through most of the following year. Moreover, dramatic changes in monetary policy typically occur during the fourth quarter, rather than at the beginning of the next calendar year (this was true for the two most dramatic changes, in 1984 and 1988). Finally, year-end figures can be manipulated by varying credit procedures, particularly since the agricultural procurement is still under way at that time. For all these reasons, the most useful figures on monetary policy describe a fiscal year that begins on September 30 annually. Table 8 shows both this figure and the ordinary year-end figures.

Table 8: Growth of Total Credit

Percentage Increase over Year Previous

	YEAR-END	END THIRD QUARTER
Dec 1981	14.5	
Sept 1982		11.6
Dec 1982	10.4	
Sept 1983		12.6
Dec 1983	12.4	
Sept 1984		15.0
Dec 1984	28.8	
Sept 1985		31.5
Dec 1985	21.4	
Sept 1986		24.3
Dec 1986	26.8	
Sept 1987		26.3
Dec 1987	19.0	
Sept 1988		21.5
Dec 1988	16.8	
Sept 1989		11.4
Dec 1989	17.6	
Sept 1990		18.0

September 1990 is a preliminary estimate base on August figures.

Perhaps more important, the process that has been largely completed with regard to nonstaple foods has barely begun in industry. Fuel and raw material product pricing is analogous to past agricultural pricing: the price has been kept low, facilitating collection of revenues in the manufacturing sector. Moreover, besides raw materials, there are a wide range of other cost factors that must gradually make their way into the cost structure of industrial products: these include higher interest rates, depreciation, and social security contributions. A similar policy decision must be made on how much of these increases to accommodate with higher prices, and how much to offset with reductions in prices elsewhere, or in reductions of government revenues. Indeed, a crucial part of price reform will be reform of the tax system, setting new "prices" for the provision of government services. Therefore, we must continue to expect cost pressures to influence the overall level of prices, and a zero inflation policy is not really a viable option.

V. Causes of Inflation II: Weak Instruments of Macroeconomic Control

The preceding discussion of relative price changes seemed to assume that Chinese policymakers have as much control over the growth of credit and money supply as do policymakers in a developed market economy. However, this is clearly not the case: the Chinese banking system is still relatively weak and underdeveloped, and this makes it more difficult for policymakers to implement a consistent macroeconomic policy. Indeed, there is an extreme point of view that holds that China, in common with other planned economies, is always characterized by shortages, forced saving, and suppressed inflationary pressures. In this view, any liberalization of prices will inevitably result in inflation, because of the pent-up demand for nearly all goods.

Whether this is true for the Soviet Union and the formerly socialist countries of Eastern European is a much debated topic. However, it seems clear that it is not strictly true in China. This argument can be made both from an institutional perspective, and by examining the dynamic characteristics of the Chinese economy. China has been characterized by parallel, free markets for agricultural products for a long time; and similar parallel markets for industrial materials at least since 1984. Whatever excess demand pressures exist can be expected to push prices upward on these parallel markets. Yet we have seen that free market prices for agricultural goods have gradually converged with planned prices. Similarly, prices in industrial markets were relatively stable from the end of 1985 through the end of 1987. Clearly, China is not always characterized by frustrated demand, for if it were, these free market prices would have been constantly bid up.

The dynamics of the economy reveal something about the relationship between the banking system and production enterprises. It may well be the case that enterprises have an "insatiable" demand for investment and production inputs because they are not adequately disciplined by market forces, i.e., because they have "soft budget constraints." But if enterprises do not have access to bank credit to fund their investment projects or input purchases, their insatiable demands will remain wishes, irrelevant to the macroeconomy. In fact, on several occasions, Chinese policymakers have been able to sharply restrict total bank credit, and drastically reshape macroeconomic conditions. This was most apparent at the end of 1989, when tight limitations on bank credit brought the economy to a screeching halt and brought on a brief period of falling consumer prices. This was only the most dramatic example of what the banking system could do, and similar though less intense episodes occurred in 1981 and early 1986. Clearly, under certain circumstances, the banking system can control effective demand. Thus, it is impossible to assert that China is always a shortage economy, not subject to the normal rules of macroeconomics.

But while China is not inevitably characterized by shortage, there are still significant weaknesses to the banking system that make macroeconomic control more difficult (Naughton, 1990). These can be considered in two categories: weaknesses that make control difficult in normal periods, and weaknesses that affect contractionary policies. During normal periods—when the economy is growing and there are no obvious crises—the control exercised by the banking system is continually eroded by the interference of powerful politicians. Government and party officials are deeply involved in economic management at every level, and without checks on political power, these officials are subject to constant temptation to coerce banks to provide funds for their favorite projects. Indeed, generally coercion is not necessary: local government and banking officials are part of a team that works together to foster industrialization, and banks are supposed to follow the priorities laid down by the government. In this context, local bank branches have every incentive to comply with the wishes of local officials (see White and Bowles). When this joint effort breaks down, local officials may then have recourse to coercion. Nor is such behavior limited to local officials: according to one emigre account, fully one-third of the large-scale investment projects approved during the Seventh Five Year Plan (1986–90) were pet projects approved by individual leaders, rather than emerging from the formal planning process (Chen Yizi, p. 51). At the national level, banking officials have more incentives to pay attention to overall macroeconomic relations; but conversely the power of top officials is subject to even fewer effective constraints. Thus, in normal times, there is a built-in tendency for credit policy to be more expansionary than banking officials would like.

Moreover, the banking system itself lacks experience in the control of the economy. As shown in Figure 2 above, policymakers monitor a measure of inflation that is extremely insensitive to short-run changes in prices. As a result, the indicators of inflation do not create clear warning signals that would help to mobilize political support around moderate credit policies. Moreover, the banking system has, since 1983, been making a gradual transition from a system of controlling total credit by means of aggregate quotas to a system of controlling local bank lending by reserve requirements and central bank operations. The new system promises greater efficiency and flexibility in the long run, but in the short run learning costs are significant. Between 1985 and 1988, credit could expand rapidly even without significant new central bank lending because the reserve requirements for local banks were set at low levels (so the money multiplier was large). Central bankers may have underestimated the speed with which local banks could maximize their lending given reserve requirements, and this contributed to the excessive growth of credit during this period.

Thus, there are reasons to believe that there is a kind of built-in bias toward excessively expansionary credit policy during normal times. Pervasive government and party pressure on an inexperienced banking system tends to create overly rapid credit growth. Nevertheless, when inflation accelerates and conditions deteriorate, the central leadership can insist on a strict credit policy. This happened at the end of 1985, the end of 1987, and the end of 1988. However, in the first two cases, strict credit controls were abandoned in the early part of the following year: it was only after the full-scale inflationary crisis of 1988 that contractionary policies could be maintained. Why were the earlier attempts at contraction abandoned before they could be effective?

It seems that the cost of contractionary policies is large in China. In any economy, contractionary policies have a cost. Restriction in the growth of credit and money causes a slowdown in the growth of current price output: typically, this slowdown is composed in part of a deceleration of inflation (the desired outcome), but also in part of a deceleration in the growth of real output. In the long run, the economy adjusts to the slower rate of price increase and returns to its long-run growth path, but the output foregone in the short-run is seldom regained and is the cost of taming inflation. In China, it appears that the short-run impact on real output is especially severe, and the delays before the economy adjusts to a lower rate of inflation especially long.

In China, virtually all credit is extended to enterprises. This contrasts with the situation in market economies where much credit goes to finance housing and the purchase of consumer durables. As a result, in a market economy, increases in interest rates quickly cause consumer to postpone large purchases, and the housing and automobile industries are particularly interest sensitive. Credit contraction, and the associated interest rises, quickly reduce final demand. By contrast, in China credit restrictions have virtually no impact on final demand. Consumer purchases are virtually unaffected, and investment is reduced only when specific bank-financed investment projects are suspended. Instead, the immediate impact comes on enterprises, which experience much greater difficulty in getting the credit they need to purchase inputs and carry on normal production.

This would not matter if enterprises voluntarily cut back their wages and investment spending. But in fact, enterprises respond to the announcement of contractionary policies with strategic behavior. It is here that the existence of soft budget constraints at the enterprise level is particularly important. Enterprises respond to their reduced access to credit by attempting to protect the types of outlays in which they have most interest. Instead of foregoing bonuses and investment projects that have already been approved, enterprises shift the burden of credit restrictions to other areas. They pile up debts to their suppliers, and they may even allow production to decline, due to their inability to purchase supplies, before they allow bonuses and investment spending to decline. This type of behavior would not make sense if enterprises truly believed they were responsible for their own long-run profits and losses. If that were the case, they would do anything to keep up production, sacrificing short-run benefits such as bonuses and investment projects. But enterprises believe that contractionary policies are temporary. If they can protect bonuses and investment in the short run, they have every reason to believe that they will be forgiven for their failure to maintain output and profit taxes to the state. Indeed, they may even realize that by letting production decline, they can put nearly irresistible pressure on policymakers to reverse contractionary policies. In other words, enterprises doubt the credibility of contractionary policies, and try to position themselves well for the economic conditions that will exist after contractionary policies are abandoned.

For example, during 1989, contractionary policies cut sharply into industrial growth. The profit of in-budget state industrial enterprises declined 19%. However, enterprise retained profits declined only 2.6%, while arrears in tax payments and bank loans increased by 72%. (Liu and Lu, 1990). Enterprises were passing the cost of adjustment onto the budget and banking system, delaying the reduction in bonuses and investment that would be required to bring the economy back into balance. Moreover, debt among enterprises exploded, surpassing 100 billion yuan in mid-1989. In this case, the expansion credit among enterprises was simply substituting for the reduction in bank credit, further delaying effective adjustment.

This kind of enterprise behavior only makes sense if enterprises believe that they will be forgiven a substantial portion of these obligations. In fact, this belief has thus far turned out to be extremely well founded. During the previous contractionary episodes of late 1985 and 1987, contraction was speedily abandoned. Faced with the difficulty of maintaining tight credit in the face of declines in real output and increasing complaints from production enterprises, Zhao Ziyang twice abandoned necessary contractionary policies that he had joined in adopting. In 1989, contractionary policies were maintained much longer, and had a real impact on inflation and output. Yet even in this case, it can be said that enterprises never really adjusted. From the final quarter of 1989, credit growth again increased (see Table 8), and during 1990, enterprises were the recipients of all kinds of special financial assistance to help them out of the difficulties created. While the 18% credit growth from the third quarter 1989 through third quarter 1990 may not seem particularly high, recall that this occurred under conditions of price stability and near stagnation of production. Credit grew at least 15% faster than nominal output, and much of the credit was directed to state-run enterprises.

Ironically, because credit was extended to enterprises, it had little effect during the first half of 1990 in increasing final demand. Enterprises in 1990 found they could get access to the credit they needed to produce (and production in fact began to revive gradually from June), but they still could not sell the output created. Just as there is a painful delay before credit cuts down on inflationary pressures, there is an almost equally painful delay before the resumption of credit growth causes a revival of final demand.

For all these reasons, credit policy in China is clumsy and slow. Ultimately, it can be effective, as eventually changes in credit policy must trickle down to final demand. But in the meantime, the costs associated with changing macroeconomic policy regimes is quite large. These problems cannot be fully solved until enterprise budget constraints are hard. But the hardening of budget constraints is a gradual process that cannot come to fruition until the end of the economic reform process. During the transition, the clumsiness of credit policy is a fact of life that must be accepted.

Thus, there are multiple causes of inflation in China during the reform process. The need to accommodate relative price changes means that some inflation is unavoidable and indeed, to be welcomed. However, the intervention of government officials in the economy and the inexperience of the banking system imparts an inflationary bias to the economy. This bias is intensified because contractionary policies are so costly and painful that there is an enormous temptation to postpone them beyond the point when they have become necessary. For all these reasons, inflation is likely to be a persistent problem in the Chinese economy.

VI. REMEDIES

There is no simple cure for Chinese inflationary tendencies. Because of the need to realign prices and the continuing weakness of the banking system, inflation will be significant for the next decade. However, precisely because of the inflationary bias in the economy and the large costs of contraction, it is especially important that credit policy maintain a consistent and tough stance. It appears that at one point in the mid-1980s one group of Chinese policy-makers saw that some inflation was inevitable, and then concluded that it was nothing to worry about. If true, this is unfortunate. Precisely because some inflation is inevitable, it is important that policymakers constantly attempt to restrain it, to "lean against the wind." Only in this way is it possible to restrain the inevitable tendency of inflation to accelerate as inflationary expectations become imbedded.

It is possible to make a few concrete recommendations that would assist in the effort to control inflation.

1. An independent central bank, not subject to intervention by top political authorities, should be established as soon as possible. Of course, given the current political realities in China, there is virtually no possibility of this occurring in the immediate future. However, we should not neglect the central importance of this measure. Even if true independence is unrealistic, policymakers should move in this direction by appointing a strong leader to head the bank and publicly supporting the authoritative character of bank decisions. This would be in the interests of political leaders, since it would enable them to avoid taking specific responsibility for unpopular economic decisions by shifting blame onto the bank, even while they provide general support to the idea of bank independence.

2. The bank should adhere to a policy of moderate, steady growth of total credit. Given the growth potential in the Chinese economy and the need for moderate inflation to accommodate price changes, credit growth need not be exceptionally low. A steady 15% growth of credit would permit both real growth and inflation to be maintained in the 7–8% range.

3. Credit growth should not be completely inflexible, but discretionary changes should be left to the banking system. The independent central bank—or the political authorities controlling the bank—should establish a set of sensitive indicators of monthly price changes, and give these indicators wide publicity. The central bank should have moderate discretion to adjust policy through its control of lending to branch banks. The indicators and bank responses should be given steady publicity so that economic agents can see that policy is consistent, and gradually adapt to a new set of expectations about central government policy. Macroeconomic policy will become much more effective and easy to implement when enterprises come to believe that the bank will regularly tighten credit in response to signs of increasing inflationary pressures.

4. The moderate inflation permitted by this credit growth should be fully utilized to carry out price reform. Progressive decontrol and adjustment of prices, combined with fiscal reform, should be steadily enacted. Adjustment of individual prices would be appropriate only for a few special cases, such as energy or housing prices. In other cases, prices can be "adjusted" by establishing new taxes and accounting rules, while allowing greater price flexibility. Clearly a few important price changes require significant policy decisions by the central government, but it is illusory to think that changes in thousands of prices can be individually managed to control the total inflation rate at some specific level. At the other extreme, keeping prices frozen simply leads to accumulation of inflationary pressures and greater problems in the future.

5. Continued enterprise reform is necessary to produce modest "hardening" of enterprise budget constraints, thereby reducing the costs of adjustment in the economy.

It is unlikely that this set of changes will be quickly implemented. However, there is nothing inherent in the Chinese economic system that would prevent these changes from being made, and it is not utopian to suggest that such changes could sharply reduce the costs of inflation in China. Stable, consistent macroeconomic policies, combined with continued reform, would allow China to gradually escape from its current inflationary dilemma. This would reduce the incidence of boom and bust cycles in the economy, and make crises such as that of 1988-89 substantially less likely.

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MARKETS VERSUS PLANS: THE KEY ROLE OF ENTERPRISE MANAGER BEHAVIOR

By Dwight H. Perkins *

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SUMMARY

There is one general theme to this short essay: Can one create some of the elements needed to make a market system work, but retain central commands in other elements and still expect to reap the benefits of greater efficiency? Or must all five of the critical elements for a successful market system be realized? Put differently, if one or more components of an effective market system prove difficult or costly to implement, can one introduce direct controls in selected areas to overcome these difficulties or will selective controls inevitably lead back to a command system?

The five key elements needed to make a market system work are:

1) Goods must be available for purchase (and sale) on the market. Allocation of intermediate and final products by an administrative body is the antithesis of a market system.

2) Prices must reflect the relative scarcities in the economy. "Prices must be right" or the enterprises will get the wrong signals from the market. With the wrong signals, products will end up in the hands of low priority users.

3) Enterprises must behave in accordance with the rules of the market, specifically they must maximize profits by cutting their costs, improving product quality, and increasing sales. Increasing profits by lobbying the state for higher subsidies, lower taxes, or for monopoly control over one's market will lead to behavior inconsistent with what is required by a well-functioning market. If enterprise behavior is inconsistent with what market rules require, then goods will end up in low priority uses, excessive inventories for example, even though prices are properly set at their relative scarcity value.

4) There must be competition between enterprises. Strictly speaking, it is possible to have a market system without competition, but

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many of the benefits of a market system are lost if competition is absent. It is competition that puts pressure on firms to behave efficiently. Monopolists are notoriously slow about improving product quality and cutting costs.

5) Inflation, the rate of increase in prices, must be kept to an acceptable level. What is acceptable or not acceptable is basically determined by politics. In some countries an annual rate of inflation of 20 or 30 percent is evidence of stability, in others it is a rate that may threaten the existence of the government. In Vietnam in 1988, for example, the rate of inflation rose to 700 percent without having any apparent impact on political stability. A 700 percent a year rate, however, does create great uncertainty in the economic sphere, which in turn makes it difficult or impossible to maintain well functioning markets. The uncertainty created by a 20 to 30 percent rate is less damaging unless it triggers a decision by government to institute price controls. Price controls in the presence of continued excess demand lead to queueing, and the inefficiency entailed in long queues leads back to formal rationing through government controlled administrative channels.

There are other elements that contribute to more or less efficient markets, but these are the essentials. The questions in the remainder of this essay all address in one way or another whether it is possible for a market system to live comfortably side by side with elements of a hierarchical or bureaucratic command system. Or are market and command systems fundamentally incompatible with each other such that one or the other must triumph in the end?

I. Must All Five Components Be in Place?

The first issue is whether all five components of a market system must be in place for a market to function with a reasonable level of efficiency.

Some economists, particularly those familiar mainly with Western market economies, often assume that the main source of inefficiency in an economy is caused by government interventions that distort prices away from relative scarcity values. If one removes these government interventions, prices will find their scarcity values and markets will function efficiently. In the urban industrial sphere of many economies the main distortions in prices are caused by tariffs and other restrictions on foreign trade. Removal of these restrictions and lowering or evening out tariffs brings domestic relative prices in line with world prices. For traded goods world prices reflect relative scarcities in the world at large and hence determine the true cost of these products for any trading nation. With trade restrictions removed, therefore, the prices are right and little more need be done.

But Western economists who analyze the problem in this way take a great deal for granted. Specifically, they assume that the other components of well-functioning markets are already in place. If goods are not available for purchase and sale on the market or if enterprise managers do not behave in accordance with the rules of the market, then getting prices right won't help much. That goods must be available for purchase and sale on the market if prices are to make a difference is obvious. That enterprise managers must behave in accordance with the rules of the market is less obvious and often forgotten, particularly by economists who are unfamiliar with economic systems which have extensive bureaucratic controls over the economy.

Profit maximization by cutting costs or raising sales is not typically the primary objective of enterprise managers in a centrally planned command economy. For decades, both in China and the Soviet Union, the main objective of enterprises was to maximize gross value of output. There were also cost and input targets, but they were often ignored. Firms generally attempted to get and hold onto any raw material or intermediate product that might be of use in meeting the output target. Inventories overflowed with goods that night prove useful at some future point in time. In such a system the only effective constraint on enterprise demand for inputs is in the hands of the government, not the enterprise. Higher prices will not restrain enterprise demand; only the direct controls of planners perform this function.

Chinese enterprises no longer maximize gross value of output, but they do not just seek profits by cutting costs or raising sales either. Enterprise managers do care now about profits, since profits have a direct connection with the level of worker benefits. But profits can be increased by negotiating lower taxes or getting larger amounts of credit at subsidized interest rates. Given the excess demand for a wide range of products and the artificially low price of many inputs, profits can be raised by steadily expanding output even if expanded output raises average cost. Higher input prices will lower the demand for those inputs, but only to a limited degree. Put in more technical language, the price elasticity of demand for industrial inputs is not zero, but it is much lower than it would be in a true market system.

How large is this excess demand in the system? There are no straightforward ways of measuring this demand, but various kinds of indirect evidence give one a general idea of the problem. First there is the size of Chinese inventories. In most market economies the change in inventories from year to year averages about 1 to 3 percent of GNP. In China the average was 7.4 percent before 1979 and still 6.6 percent in the 1980s (circulating capital as a percentage of NMP). The Kornai Index, the ratio of input inventories to output inventories, is also of some relevance. That ratio for a small sample of Chinese industries or was 4.5 to 4.6 in 1983–84 and 3.8 in 1985. The index for most Western market economies hovers around 1.0 and for South Korea, around 2.0. For the Soviet Union and Poland, in contrast, the ratio is over 10.0.

Another way of looking at the problem is through China's exchange rate. China's official exchange rate in 1987 was 3.7: U.S. $1.00 and there is little question that if enterprises were free to import, the demand for imports would have exceeded the supply of foreign exchange by a substantial margin. The black market rate at the time was 5:1 or 6:1, but the black market (or the swap market) was too restricted to be a good measure of the excess demand. What is the exchange rate that would have brought about balance between the supply and demand for imports in the absence of administered quotas? And how does that exchange rate compare with the rate that would achieve this balance in a Chinese economy where all enterprise maximized profits in the face of hard budget constraints?

In the late 1970s China's purchasing power parity exchange rate relative to the U.S. dollar was probably around 1:1 based on the price comparisons attempted by Irving Kravis. Between 1979 and 1987 the inflation rates in both China and the United States were similar, so the purchasing power parity in 1987 was also about 1:1. In developing countries, however, the actual exchange rate always deviates substantially from the purchasing power parity rate, due to the influence of the relative prices of nontraded goods and services. These affect the purchasing power parity exchange rate but not the foreign trade exchange rate. The difference between the two rates is known as the "exchange rate deviation index" and for poor countries this deviation index is typically 2.5 to 3.0. Thus a country such as China, with a purchasing power parity rate of 1:1, could expect to have a foreign trade exchange rate of 2.5:1 or 3.0:1. The latter exchange rate could be expected to create an equilibrium in the supply and demand for imports if enterprise managers were behaving according to the rules of the market. If managers were not behaving in accordance with such rules, the exchange rate needed to achieve equilibrium would rise above 3.0:1. In China, even rates of 5:1 or 6:1 might not achieve equilibrium. The difference between 5.1 or 6:1 or even higher rates relative to the 3:1 rate of a well-functioning market system is another measure of the degree of excess demand of Chinese enterprises caused by the soft budget constraint and other sources of deviations from proper market behavior.

This degree of excess demand relative to what would have existed in a true market system is very large, but it is probably much less than what existed before the reforms of the 1980s. In 1977 and 1978, for example, China encouraged enterprises to import goods from abroad, implying that few restrictions would be placed on such imports. The result, according to the calculations of one Hong Kong company, were contracts or letters of intent to import around U.S. $600 billion worth of goods, a formidable figure considering that China's foreign exchange earnings in those years were well under $10 billion per year. China's enterprises at that time were behaving in accordance with the rules of central planning and bureaucratic commands and it is difficult to imagine how far the exchange rate would have had to rise to keep demand for imports in line with ability of the country to earn foreign exchange to pay for them. One suspects that even a rate of 10:1 might not have been sufficient.

By the standards of 1977–78, therefore, China by the late 1980s had made considerable progress in changing enterprise behavior in the direction needed to make markets work efficiently. But it is also true that China still had a long way to go before Chinese enterprises behaved in accordance with market rules, even to the degree found in places such as South Korea, let alone free enterprise Hong Kong.

III. CHOICES IN THE FACE OF EXCESS DEMAND

Given this large and chronic excess demand, what are the choices that face economic policymakers?

One choice would be to free all prices and eliminate all quotas, in effect to create completely free markets even in the presence of substantial excess demand. The initial impact of this decision would be a major across-the-board rise in prices. If interest rates were included in the prices that were freed up, these rates would rise until enterprise demand for credit was brought in line with the value of the goods what could be purchased with that credit, and prices generally would presumably stabilize at that point. Real interest rates, just like the exchange rate, would have to be well above what would be the case in a true market system where enterprises were behaving according to the rules of the market. The real interest rate and exchange rate would then come down to more appropriate levels representing true market equilibrium rates.

The above degree of liberalization, however, is not likely to be realistic in any existing socialist country. More realistic is a decision to free up prices of many industrial inputs and final products, but to hold the interest rate well below an equilibrium level. In that situation the prices of these inputs and final products will rise sharply, and enterprises will go to the banks for increased credit to buy the higher priced goods. Demand for credit will greatly exceed the supply, which will put pressure on the monetary authorities to expand the money supply so that the banks can expand enterprise credits. If the monetary authorities refuse to accommodate this situation, then enterprise will get into a political fight for whatever credit does exist. Depending on their political clout with the banking system, some priority areas will get enough credit while others will not. If the banking system handles credit rationing well, the degree of disruption to the economy may not be excessive. If credit is rationed poorly, the results could be very damaging to the economy.

In the Chinese case, it is probably more realistic to expect that the monetary authorities will lack the political independence needed to hold the line on monetary expansion. In that case credit will expand rapidly, prices will rise, enterprises will raise wages to keep workers from being hurt by inflation, which will increase demand further and lead to more increases in prices. The actual process is more complicated than this, but the likely result is a price spiral caused by a combination of excess demand and cost-push pressures. Something like this is what occurred in China in 1988 and 1989.

If one cannot hold the line on credit but is unwilling to tolerate inflation, the next step is to have the state fix prices directly. Assuming one is not going to fix all prices, the question is, which prices to fix. One option is that practiced in China in the late 1980s of having a two-tier pricing system. Under some circumstances a two-tier pricing system will behave in much the same way as would the complete freeing up of prices. Most decisions of enterprises will be made on the basis of the freed up market prices. Goods distributed by the state at low fixed prices mainly serve the purpose of subsidizing favored enterprises. The overall rate of inflation may be lower than in the completely uncontrolled prices case, mainly because some of the cost-push pressures are absent, but this too is a complex issue and the impact of a two-tier price system on the rate of inflation is not easy to assess.

An alternative to the two-tier price system is to fix prices for some goods but not for others, or to fix prices for some enterprise but not for others. One could fix the prices of certain capital goods and intermediate products deemed to be critical. These products, of course, would have to be distributed through administrative channels in a planned or rationed way since demand would greatly exceed supply.

Fixing prices for some enterprises, the larger ones, for example, but not the smaller ones, probably would not work. The temptation to earn easy profits by selling state allocated goods at low prices to smaller firms which would pay higher prices would be too great.

The only real choice for economic policymakers, therefore, is whether to control the prices of a few products or a great many. The more products there are whose prices are controlled, the more complex the job of the planners, particularly in China where there are so many small-scale enterprises. Inflation caused by excess demand does not disappear; it is channeled on the remaining free markets or shows up as unwanted increases in savings deposits. Controls may reduce the cost push elements in inflation, but it is also possible that they may not. It all depends on how administered prices are managed in practice.

Administered prices and the resulting quotas, of course, eliminate most competition from the system. What competition remains is largely confined to efforts to extract more inputs and subsidies from the central planning authorities. Allocative efficiency will also suffer, but by how much depends on the skills of planning authorities and the complexity of their tasks.

For a nation where enterprises behave not according to the rules of the market, therefore, the choices facing economic policymakers are not very attractive. Either one tolerates a high level of inflation or a high level of inefficiency in the system. One can solve the problem by completely freeing up all prices including interest rates and the exchange rates, but this step is probably too radical to be realistic. One can also return to a more stable and predictable world by reinstituting controls over most prices and quantities, but the Soviet Union is a good object lesson of where that is likely to lead. China is likely to face Soviet style inefficiency much earlier in its growth process if for no other reason than the size of China's population and economy and the large number of enterprises that need to be controlled.

The above analysis, therefore, underlines the importance of changing enterprise behavior so it conforms better with what the market requires. The greater the degree to which this can be accomplished, the easier it becomes to loosen controls over prices without engendering excess inflation, among other things.

But how does one change the rules of enterprise behavior? Early theorists of socialist economies suggested the goal could be accomplished by simply ordering enterprises to maximize profits. No one today thinks the task will be so simple.

The essence of the process involves breaking the ties between the enterprise and the government bureaucracy, but how to do this is the question. An independent banking system that itself faced a hard budget constraint would be a help. Banks that could not pass on their losses to the central bank would have a powerful incentive to ensure that enterprises paid them back and at a profitable rate of interest. Creating new forms of public ownership such as one enterprise owning shares in another might also be a step in the right direction. A board of directors made up such of owners might also be a step in the right direction. A board of directors made up of such owners might be more interested in the enterprise's achieving higher profitability than would the central government's economic policymakers, although on cannot be certain of this. Conceivably it is possible to retrain ministries and central planners so that they reward managers on the basis of those managers' ability to cut costs and raise sales instead of on the basis of a large number of other criteria as is presently the case. As long as the government bureaucracy control appointments and promotions, enterprise managers will attempt to do what they think these government officials want, regardless of what the law might say.

Finally, making a market system work more efficiently in a socialist context requires experimentation. Many of the options discussed above have never really been tried in practice and no one knows precisely how they will turn out. The only way to discover what will work and what will not is to try and make adjustments on the basis of actual experience. For experimentation to be feasible, however, those in charge of reform measures must be able to take risks without fear of reprisals if events do not go precisely as planned. Consistently bad experiments might be a legitimate ground for demotion, but the system cannot be oriented toward rewarding only those who stay closest to whatever the current orthodoxy may be.

TAXATION REFORM IN CHINA'S PUBLIC FINANCE

By Penelope B. Prime *

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SUMMARY

Tax reform is an important component of China's overall economic reform because taxation raises government revenue and influences enterprise decisions, without subjugating enterprises to direct government control. This paper presents an overview of China's tax reform since 1983. The main feature of this tax reform was that state enterprises began paying industrial and commercial taxes instead of remitting profits, referred to as *li gai shui* (changing profit to tax). In principle, this tax reform contained many desirable characteristics, but problems with other aspects of economic

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reform have diluted the positive incentive effects implicit within the new tax system.

I. INTRODUCTION

Taxation is a key determinant of economic behavior and resource allocation. The more decentralized an economy is, the more important the tax structure becomes in enhancing, or hindering, the effectiveness of the public sector. As part of its ambitious economic reform program beginning in 1978, China has paid increasing attention to how taxation affects decentralized decision-making. Although experiments with new taxes have been ongoing, comprehensive changes in the tax system began in 1983. Tax reform is important in China because of its potential effect on government revenue and on the central government's ability to guide enterprises, and local governments, without stifling initiative.

During the period of economic reform, and especially in the second half of the 1980s, China has also experienced persistent budgetary deficits. While these deficits have not been large by international standards, the fiscally conservative Chinese leadership considers deficits a major problem. The deficit problem has caused Chinese policy-makers to be concerned with increasing tax revenue to cover budgetary expenditure.

This paper presents an overview of China's tax reform and recent trends in government revenue collection. The first section discusses the new role China envisions for tax policy. Trends in the state budget, and in growth and sources of government revenue, are presented in the second and third sections. The final two sections look at enterprise reforms and performance, and the potential effect of these on government revenue.

While tax policy would be expected to affect government revenue, a causal relation is difficult to establish in this case because of the many other reforms China has implemented along with tax reform. The purpose here is simply to look at what has been happening on the revenue side of the budget in light of China's new tax policies. The theme that emerges is that while China's tax reform is well intended, the ability of the government to establish a sound but flexible, tax-based public finance system is both essential to, and dependent on, the success of the other economic reforms.

II. A NEW ROLE FOR TAX POLICY

The National Tax Bureau of the Ministry of Finance summarized the purpose of China's tax reform in the following six general goals: [1]

1. Increase the number of tax categories and tax rates.
2. Vary tax rates by product and sector in order to influence the direction of economic development, and to encourage exports while protecting domestic production.

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[1] Guojia shuiwu ju [National Tax Bureau], *Shuifa daquan* (*SFDQ*) [Complete Guide to Tax Law] (Beijing: Zhongguo caizheng jingji chubanshe, 1989), p.9.

These two goals contrast with policy in the late 1960s and early 1970s when China's goal was to simplify the tax system as much as possible. Within industry and commerce, for example, the number of taxable items fell from 108 to 44. The number of tax rates also fell, with reportedly only 16 in use. Most enterprises paid only one tax.[2] Simplification was consistent with direct government control over enterprises through the planning process, but to encourage enterprise initiative while maintaining some influence over the direction of the economy requires sophistication in tax instruments and adjustable tax rates.

3. Improve management and increase the economic responsibility of state enterprises by changing to a profits tax with retention of after-tax profits, rather than having enterprises remit all of their profits directly to the state budget.

Before economic reforms began in 1978, enterprise remittance of profits made up a larger share of government revenue than did taxes. The goal of replacing enterprise profit remittance with industrial and commercial taxes establishes taxation as an indirect "lever" to influence managers' decisions. This reform separates state enterprises from the government budget. Previously state enterprise accounts were part of China's public finance budget, and were made compatible with plan targets. Enterprises contributed nearly all of their profits to government revenue, but profits themselves were only an accounting phenomenon. Likewise, wage payments and reinvestment decisions had little to do with whether the enterprise was profitable or not, and managers had little control over incentives or production.

Taxation of state enterprise profits would reduce the difference between state and collective enterprises. Unlike state enterprises, collectives have always paid profit taxes and have been responsible for losses if they occurred. The budget has subsidized collectives to some extent, but the operation of collectives has not been part of the budget's function. Therefore one significance of separating state enterprises from the budget would be to put state enterprises in competition with collectives for inputs and customers. Furthermore, profits would become the most important objective for state enterprises, since funds for bonuses and reinvestment would no longer be provided through the budget.

This goal has been implemented via the *li gai shui* tax reform, which is discussed later in this section.

4. Use taxes to adjust enterprise profits that are excessively high or low due solely to the artificial nature of the planned price system.

The purpose of this goal is to reward enterprises by allowing them to keep after-tax profits that are earned as a result of better management rather than as a result of the price system. This goal is necessary because China has gone forward with tax reform before price reform.

This goal has also been implemented as part of the *li gai shui* reform in the form of an "adjustment tax" on enterprise profits.

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[2] *SFDQ*, p.7.

5. Guarantee that the government will have sufficient revenue while creating incentives for enterprises, localities, and government bureaus to increase their profits by devising ways to share increments in profits.

This goal addresses China's desire to develop a tax policy that will give incentives to enterprises to increase their profits, and to governments to improve their tax collection and supervision functions. It is an extension of goals 3 and 4 in that it addresses increments in profits earned or revenue collected, and would allow higher retention rates for these increments.

To encourage enterprises to increase profits, this goal has been implemented as part of measures designed to make enterprises more "responsible" for their performance. This is discussed in section V of this essay in connection with the enterprise contract system. To encourage local governments to increase revenue collection, the Ministry of Finance has tried various forms of central-local government revenue-sharing. This is discussed in section IV.

6. Divide each tax into central and local (and shared) portions to ensure both levels have taxation authority and sources of revenue.

In the past, local governments have not had the authority to tax for local needs. They have relied on resources that were approved by, and usually shared with, central authorities. At the same time, the majority of government revenue is collected by local governments for the central government. The purpose of this goal, in combination with goal 5, is to establish a less arbitrary division of revenue sources and expenditure responsibility. The division of each tax into local, central, or shared proportions was established in 1985.

In implementing these six general goals, the core program has been the introduction of a new set of industrial and commercial taxes that replaced profit remittance in state enterprises, called *li gai shui. Li gai shui* was implemented in two phases. In the first phase, begun in June 1983, enterprises paid a profit tax and remitted a portion of after-tax profits.[3] Various calculation methods of tax and profit payments were used, but total payments for 1983 were set to be approximately the same as in 1982. In the second phase of *li gai shui* all profit remittance was replaced with taxation. This phase began in October 1984, and comprised the following five parts:

1. Divide the industrial-commercial tax into four taxes (product, value-added, turnover, and resource); make the product tax more detailed with adjustable rates.
2. Collect a natural resource tax from mining enterprises. (This tax is in addition to the salt tax, which has existed since 1950).
2. Reintroduce taxes on housing, land utilization, vehicle utilization, and urban maintenance and construction.

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[3] For details of this phase see Katharine Huang Hsiao, *The Government Budget and Fiscal Policy in Mainland China* (Taipei: Chung-Hua Institution for Economic Research, 1987), pp.162-64.

4. Levy a 55 percent profits tax on large and medium sized state enterprises, and one of eight rates on small state enterprises.
5. Levy an additional adjustment tax on profits (an excess profits tax), using 1983 profits as a base.

Most of these five parts have been implemented. The existing industrial and commercial tax categories as of 1989, and their starting dates are summarized in Figure 1. These changes have substantially increased the complexity and sophistication of China's tax system. If these changes work as intended, this increased sophistication can serve to make China's tax system more flexible and transparent, and therefore a potentially powerful "economic lever" for influencing the direction and performance of the economy.

III. THE GOVERNMENT BUDGET

Several recent trends in China's public finance, however, suggest that the transition from a centrally directed public finance system to one that is tax-based will not be easy. Budget deficits have been one problem that has been particularly sensitive for Chinese leaders. Table 1 reproduces annual official figures since 1978 for China's total (central and local) budgetary revenue and expenditures and the size of the surplus or deficit. These figures show that China's budget deficit problem was consistently worse during the seventh Five-Year Plan (1986–1990) compared with the previous Five-Year Plan period (1981–1985). The seventh Five-Year Plan period began with a deficit of 7.06 billion yuan in 1986. In 1989 the deficit reached 9.54 billion yuan, with a planned deficit in 1990 of 8.90 billion yuan. The average deficit for the five-year period was 8.11 billion yuan compared with an average of 2.42 billion in the previous five-year period.[4]

Furthermore, these official figures include revenue raised from issuing government bonds as budgetary revenue. The practice of counting bonds as revenue is common in socialist planned economies because of the ideological and political importance placed on a balanced budget in a socialist system. This goal has resulted in accounting practices that differ from Western methods, often with the purpose of decreasing or hiding deficits.[5] In Table 2 the official figures are adjusted to exclude foreign and domestic bonds as revenue. With these adjusted figures the deficit situation looks substantially worse, reflecting the fact that reliance on raising revenue by issuing bonds has grown in recent years. The adjusted deficit in 1986 was 20.88 billion yuan. The deficit steadily increased throughout the period to reach 36.97 billion in 1989, with a planned deficit of 42.34 billion in 1990.

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[4] Part of the deficit increase is explained by a change in accounting practices. Before 1986 both price and enterprise subsidies were recorded as negative revenue. Beginning in 1986 price subsidies have been recorded as an expenditure item. It is unlikely, however, that the three-fold increase in the deficit between the two five-year periods can be explained in this way. See Caizheng bu zonghe jihua si [General Planning Department, Ministry of Finance], *Zhongguo caizheng tongji 1950–1988* (*ZGCZTJ*) [China's Finance Statistics 1950–1988] (Beijing: Zhongguo caizheng jingji chubanshe, 1989), pp. 17, 197, and Guojia tongji ju [State Statistical Bureau], (*ZGTJNJ, 1989*).

[5] See P. T. Wanless, *Taxation in Centrally Planned Economies* (New York: St. Martin's Press, 1985), pp. 66–7.

Figure 1. Industrial and Commercial Taxes: 1989

Circulation Taxes	Profit and Income Taxes	Resource Taxes	Special Purpose Taxes	Property & Behavior Taxes
1. Product (1984)	4. State enterprise profit (1984)	13. Salt (1950)	15. Construction (1983)	19. Housing (experimental)
2. Value added (1983)	5. State enterprise adjustment (1984)	14. Natural resource (1984)	16. Oil consumption (1982)	20. Vehicle use (1986)
3. Turnover (1984)	6. Collective enterprise profit (1986)		17. Bonus (1984)	21. Urban maintenance and construction (1984)
	7. Urban-rural individual industrial industrial-commercial profit (1986)		18. Wage adjustment (1985)	22. Slaughter (1950)
	8. Individual income (1980)			23. Animal transaction tax (1953)
	9. Individual adjustment (1987)			24. Market transfer (1962)
	10. Chinese-foreign joint-venture profit (1980)			25. Land use (experimental)
	11. Foreign enterprise profit (1982)			
	12. Private enterprise profit (proposed)			

Sources: Guojia shuiwu ju [National Tax Bureau], Shuifa dequan (SFDQ) [Complete Guide to Tax Law] (Beijing: Zhongguo caizheng jingji bu chubanshe, 1989), pp. 8-13; Caizheng bu zenghe jihua si [General Planning Department, Ministry of Finance], Zhongguo caizheng tongji, 1950-1988 (ZGCZTJ) [China's Finance Statistics, 1950-1988] (Beijing: Zhongguo caizheng jingji chubanshe, 1989], pp. 40-43.

Notes: 1. Dates in parentheses give approximate beginning of implementation.
2. Some of the taxes have been reintroduced. For example, the 1986 vehicle use tax is a new form of the vehicle license tax begun in 1950.

Table 1. Total National Budgetary Revenue, Expenditure, and Balance: 1978-1988 (billion yuan)

Year	Revenue	Expenditure	Surplus or deficit
1978	112.11	111.10	1.01
1979	110.33	127.39	-17.06
1980	108.52	121.27	-12.75
1981	108.96	111.50	-2.55
1982	112.40	115.33	-2.93
1983	124.90	129.25	-4.35
1984	150.19	154.64	-4.45
1985	186.64	184.48	2.16
1986	226.03	233.08	-7.06
1987	236.89	244.85	-7.95
1988	262.80	270.66	-7.86
1989	291.92	301.46	-9.54
1990	323.65	332.55	-8.90

Note: The figures for 1986 and later are not compatible with figures of revenue and expenditure from previous years. In 1986, due to the fact that some items previously deducted from revenue were reclassified as expenditure, there were nominal increase in both revenue and expenditure. Figures for 1990 are planned.

Sources: Guojia tongji ju [State Statistical Bureau], Zhongguo tongji nianjian, 1989 (ZGTJNJ, 1989) [China's Statistical Yearbook, 1989] (Beijing: Zhongguo tongji chubanshe, 1989), p. 657, for 1978-1987; ZGCZTJ, p. 12, for 1988; and Foreign Broadcast Information Service (FBIS) 12 April 1990, pp. 16-17, for 1989 and 1990.

IV. TRENDS IN REVENUE COLLECTION

The fact that budget deficits have worsened during the period in which tax reform was implemented raises the question of how government revenue has fared.

UNSTABLE GROWTH IN REVENUE

One salient characteristic, and problem, for China's public finance has been the variability of budgetary revenue. This is shown in Table 3, where bond revenue has been excluded. Revenue actually fell 4.9 percent in 1979, 2.4 percent in 1980, and 2.5 percent in 1981. Revenue increased annually after 1981, but at rates varying from a low of 2.3 percent in 1982 to a high of 22.1 percent in 1985.

Part of this instability was due to inflation, since revenue and expenditure data are reported in current prices. For comparison, Table 3 also gives China's officially reported, annual increases in

Table 2. Total National Budgetary Revenue, Expenditure, and Balance (Adjusted): 1978-1990 (billion yuan)

Year	Revenue	Expenditure	Surplus or deficit
1978	112.11	111.10	1.02
1979	106.80	127.39	-20.60
1980	104.22	121.27	-17.05
1981	101.64	111.50	-9.86
1982	104.01	115.33	-11.32
1983	116.96	129.25	-12.29
1984	142.45	154.64	-12.19
1985	177.66	184.48	-6.82
1986	212.20	233.08	-20.88
1987	219.94	244.85	-24.91
1988	235.72	270.66	-34.93
1989	264.49	301.46	-36.97
1990	290.21	332.55	-42.34

Note: The official revenue and expenditure data have been adjusted by excluding domestic and foreign bonds. The figures for 1990 are planned.

Sources: ZGCZTJ, pp. 11-12, 16-17, for 1978-1988; FBIS 12 April 1990, pp. 16, 19, for 1989 and 1990.

retail prices. Even considering inflation, however, there was still much variability in revenue growth, and between 1987 and 1989 revenue grew less than the rate of inflation.

Another way to evaluate revenue growth is to account for economic growth using a measure called revenue buoyancy.[6] Revenue buoyancy is calculated in Table 3 as the percentage change in revenue divided by the percentage change in national income (*guomin shouru*). A buoyancy value of one or more would imply that the revenue-generating ability of the public finance system is keeping pace with economic growth. A value less than one would imply that the system is not capturing potential revenue sources as the economy grows. These interpretations are subject to the caveat that this measure does not distinguish between automatic increases in revenue due to growth and increases resulting from changes in the public finance system itself (e.g., new taxes).

Calculations of China's revenue buoyancy are given in the last column of Table 3. With this measure China's revenue collection also appears very unstable. China's revenue buoyancy was just over one between 1983 and 1986, but it was low (and negative)

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[6] Luc De Wulf, "International Experience in Budgetary Trends during Economic Development and Its Relevance for China," *World Bank Staff Working Papers*, no. 760 (Washington, D.C.: World Bank, 1986.

Table 3. Annual Percent Change in Revenue, National Income, and Retail Prices, and a Measure of Revenue Buoyancy: 1978-1989

Year	Revenue	National income	Retail prices	Revenue buoyancy
1978	24.8	13.0	0.7	1.9
1979	-4.9	10.7	2.0	-.5
1980	-2.4	9.6	6.0	-.3
1981	-2.5	6.6	2.4	-.4
1982	2.3	7.7	1.9	0.3
1983	11.7	10.6	1.5	1.1
1984	19.7	17.7	2.8	1.1
1985	22.1	22.0	8.8	1.0
1986	17.8	11.5	6.0	1.5
1987	3.6	17.0	7.3	0.2
1988	6.9	22.9	18.5	0.3
1989	11.5	9.9	17.8	1.2

Note: The percentage changes in revenue and national income are based on figures given in current prices. Official revenue data have been adjusted to exclude domestic and foreign bonds.

Sources: Revenue (adjusted data), Table 2; national income, ZGTJNJ, 1989, p. 29, for 1978-1988, and Beijing Review 33.15 (9-15 April 1990): centerfold, p. 1, for 1989; retail prices, ZGCZTJ, p. 180, for 1978-1988, and Beijing Review 33.17 (22-29 April 1990): documents, p. III., for 1989.

before then, near zero in 1987 and 1988, and then back to more than one in 1989. There was a jump from 0.3 to 1.1 in the value of revenue buoyancy between 1982 and 1983, which coincides with the first phase of *li gai shui*, but this increase was not sustained. So a problem with variability, and therefore lack of predictability, in the size of government revenue has continued despite tax reform.

CHANGES IN THE SOURCES OF REVENUE

While tax reform seems to be a minor factor in annual fluctuations of government revenue, it has substantially altered the sources of budgetary revenue. As a result of *li gai shui*, there has been an increase in the importance of revenue collected from taxes and a concurrent decrease in direct transfers of enterprise revenues into the government treasury.

The changes in sources of budgetary revenue are summarized in Figure 2. The percentage of enterprise revenue in total budgetary revenue has decreased steadily from 51.0 percent in 1978 to only 1.9 percent in 1988. Concurrently, tax revenue has increased from

46.3 percent to 74.0 percent, respectively, over the same period. Fees generated 7.1 percent of revenue by 1988,[7] and bonds generated 10.3 percent. Neither fees nor bonds were sources of revenue in 1978.

Although revenue from taxes has increased, the makeup of tax revenue itself has not changed, as shown by Figure 3. Industrial and commercial taxes represented 86.9 percent of total taxes in 1978 compared with 88.4 percent in 1988. The rest of tax revenue was comprised of agricultural taxes, customs duties, and a small category of "other taxes." Direct agricultural taxes have always represented a small percentage of total tax revenue in China's public finance.[8] Agricultural tax revenue represented 5.5 percent of total tax revenue in 1978, falling to 3.1 percent in 1988. Customs duties have also been a minor source of revenue. They represented 5.5 percent of tax revenue in 1978, increasing to 6.5 percent in 1988.

Within the category of industrial and commercial taxes, however, major changes have occurred with the introduction of *li gai shui*. These changes are illustrated in Figure 4. The industrial and commercial tax (sometimes referred to as the consolidated industrial and commercial tax), represented 87.5 percent of all industrial and commercial taxes in 1978. With *li gai shui* this tax was replaced with four new taxes: product tax, value added tax, turnover tax, and resource tax. By 1987 the revenue from these four taxes together represented 83.6 percent of all industrial and commercial taxes. The remaining 16.4 percent came from the industrial and commercial profit tax (7.9 percent), taxes on Chinese-foreign joint ventures and foreign firms (0.3 percent),[9] and other, minor taxes (8.2 percent).

CENTRAL-LOCAL GOVERNMENT FISCAL RELATIONS

In connection with tax reform, there has been much discussion in China on the proper division of fiscal responsibility between the central government and the provinces, and between provinces and lower-level governments. A series of experiments in fiscal decentralization have been implemented over the last decade with the intention of finding the best mix of central-local revenue sharing and expenditure responsibility.[10] The goal of these changes has been to introduce incentives for local government to care about the profitability of enterprises in their jurisdictions, and to improve revenue collection. Beginning in March 1985, the revenue collected from each tax has been designated to go to either central or local governments, or to be shared at a predetermined rate.

The division of revenue between the center and localities over the decade, given in Figure 5, shows that the center's share has in-

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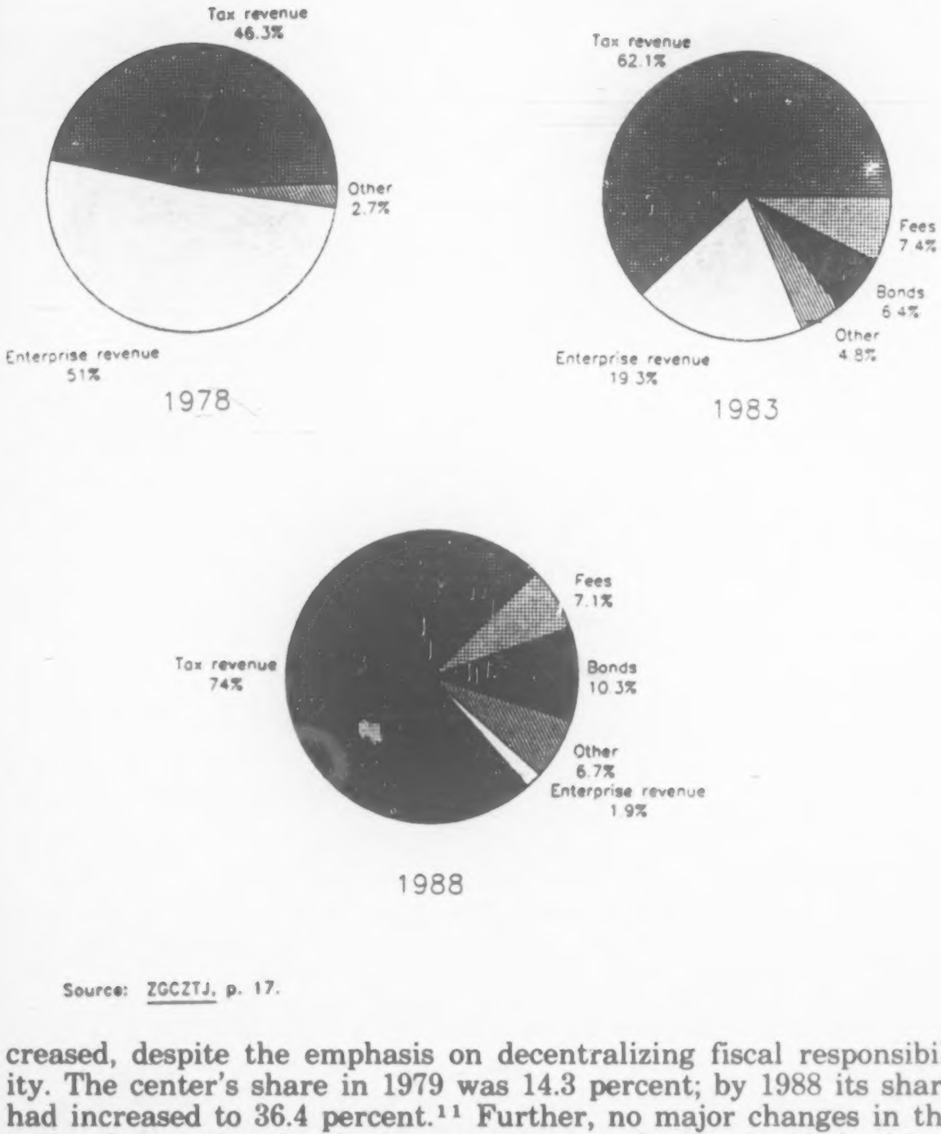
[7] Examples of fees are usage fees paid by enterprises on fixed and working capital.

[8] The actual contribution of agriculture to government revenues has been much higher than direct taxes indicate. Agriculture has also contributed to government revenue through pricing policies and collection of special fees (Hsiao, *The Government Budget*, p.109).

[9] This figure is low because even though foreign business in China has increased rapidly in the last decade, its importance is still small compared with the size of China's economy. Also many foreign companies receive tax "breaks" in the form of low rates or uncollected taxes, although these are often countered with high prices for goods and services bought within China.

[10] For a description of the numerous systems tried, see Hsiao, *The Government Budget*, pp.72-84.

Figure 2. Sources of Budgetary Revenue by Category: 1978, 1983, and 1988



Source: ZGCZTJ, p. 17.

creased, despite the emphasis on decentralizing fiscal responsibility. The center's share in 1979 was 14.3 percent; by 1988 its share had increased to 36.4 percent.[11] Further, no major changes in the ratio of central to local revenue appear to have coincided with *li gai shui* in 1983 or 1984, or with the beginning of determining central and local revenue on the basis of each tax in 1985.

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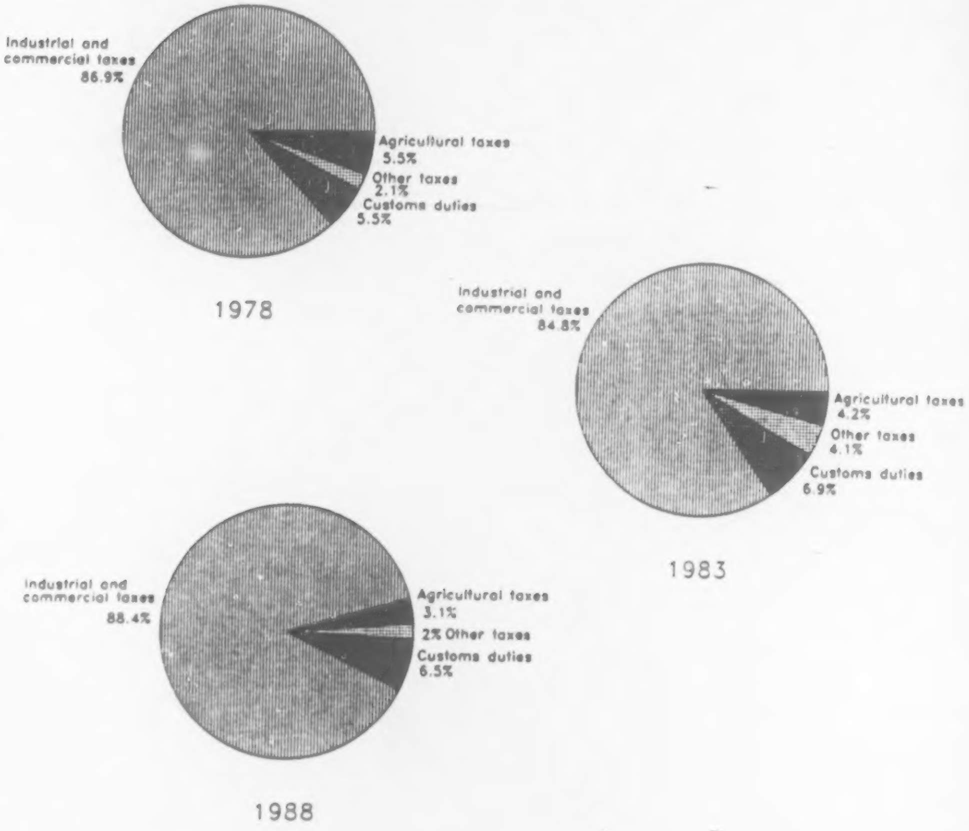
[11] These figures are based on domestic revenue only. The center's share would be higher if foreign revenue was included.

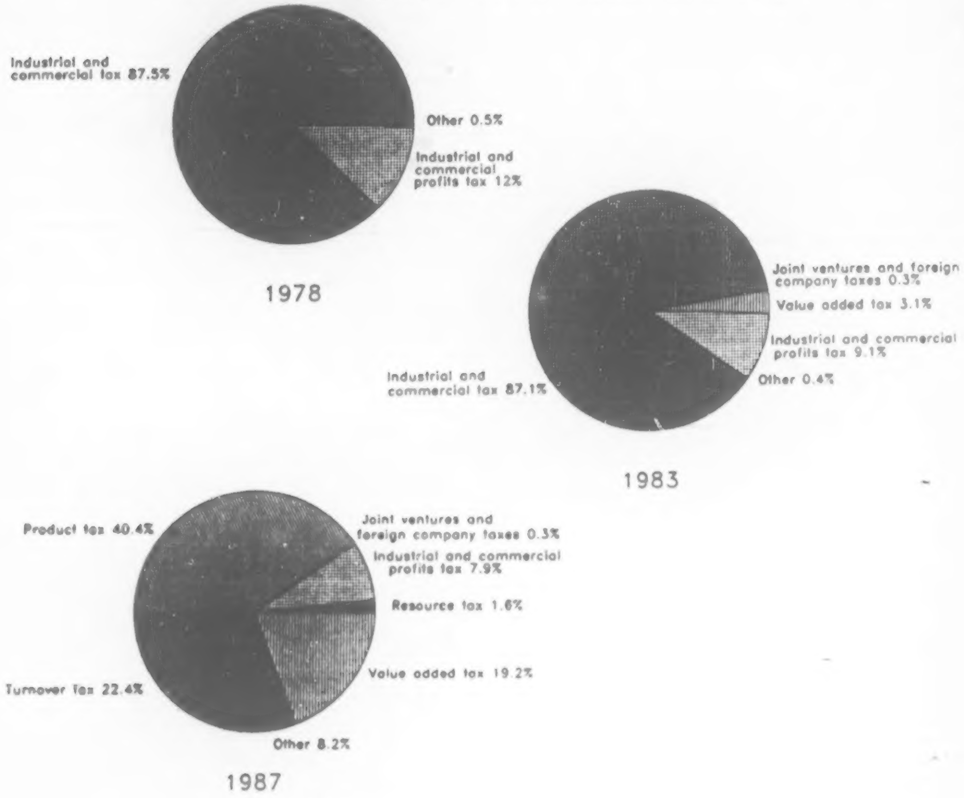
Figure 3. Sources of Tax Revenue by Category as a Percentage to Total Tax Revenue: 1978, 1983, and 1988



Source: ZGCZTJ, p. 37

Even so, there has been much concern in Beijing that central revenues are inadequate, and that local governments have gained financially at the expense of the center. This apprehension over the size of central funds originates in the distinction between budgetary and extrabudgetary funds. While the center's share in budgetary revenues has increased, budgetary revenue itself has fallen dramatically compared with national income. As Figure 6 illustrates, in 1978 budgetary revenue represented 37.2 percent of national income; in 1988 it represented only 20.0 percent. In contrast,

Figure 4. Industrial and Commercial Taxes by Category: 1978, 1983, and 1987



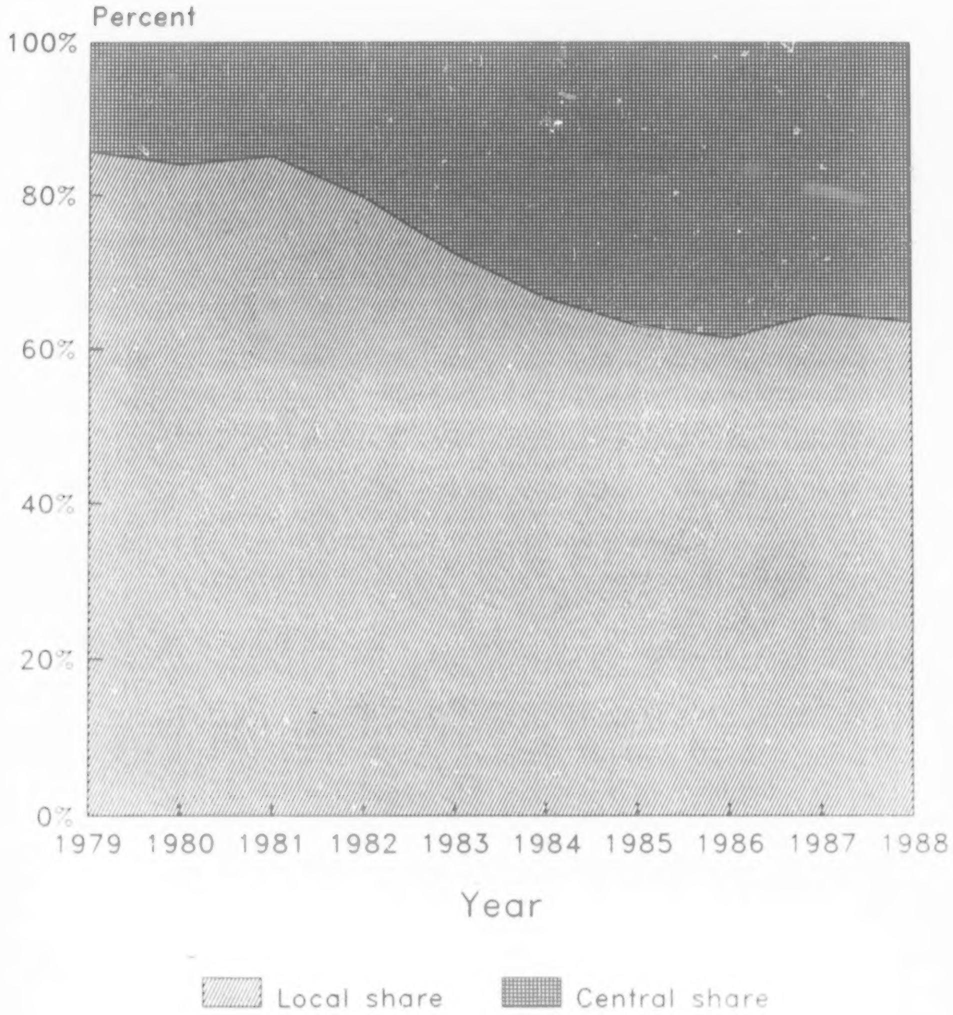
Source: ZGCZTJ, p. 40–43.

Note: Data for 1987 are used here, rather than for 1988 as in Figures 2 and 3, because comparable data for 1988 are incomplete.

extrabudgetary revenue increased from 11.5 percent of national income in 1978 to 19.3 percent in 1988. Since extrabudgetary revenue is controlled primarily at local levels, these trends would explain the central government's concern over its control of revenue.

Figure 6 also suggests that a halt in the rise of extrabudgetary revenue coincided with tax reform. An inverse relationship between budgetary and extrabudgetary revenue, as a percent of national income, existed until 1982; that is, as budgetary revenue fell, extrabudgetary revenue rose. Beginning in 1983, their relationship

Figure 5. Central–Local Revenue Sharing: 1979–1988



Source: ZGCZTJ, p. 59.

Note: Based on data for domestic revenue including domestic bond revenue.

has stabilized with their proportions in national income generally moving together (except for a jump in budgetary revenue in 1986). More research is needed to understand how China's tax system affects extrabudgetary revenue.

V. THE "ENTERPRISE RESPONSIBILITY" FACTOR

Complicating the tax reform picture are various forms of enterprise reform, or "enterprise management responsibility," begun by the Ministry of Finance in 1987.[12] With these reforms, contracts for fixed periods of time are set up between enterprises and the Ministry. The contracts specify quotas for payment of profit taxes and adjustment taxes. Methods for deciding on the quotas are numerous and complex, but basically the enterprise agrees to pay a set percentage of profits based on previous performance, and then profits earned above this are taxed at lower rates. Since profit tax rates fall as the amount of profits increase, these contracts are supposed to create incentives for enterprises to increase profits.

Under any system that taxes profits there is an incentive to reduce the amount of profit subject to tax. In China this incentive has been strengthened by the tax-contract system, even to the point of reporting losses, because there is little threat of bankruptcy for unprofitable enterprises. In fact, subsidies to unprofitable enterprises may be guaranteed to enterprises within the contract system, although the Ministry of Finance's goal is to build into the contract that subsidies will be phased out over time. As a result, certain practices that reduce accounting profits are very popular, whether an enterprise is profitable or not. For example, wages and nonwage benefits, such as housing, have increased dramatically, as has borrowing for investment, because both worker benefits and repayments on these loans are deducted before the tax liability is assessed.

Another result of the contract system is that taxes on profit are in effect negotiable. According to the tax code, the tax rate on earnings of state firms is 55 percent for medium to large enterprises, and one of eight rates between 10 and 55 percent for small enterprises, plus the adjustment tax.[13] In actuality, because the profit and adjustment taxes are negotiated according to the specific contract, the rates vary for each enterprise. Tax assessors have the authority to consider all sorts of special circumstances when the contracts are made.

Some of these special circumstances are beyond the control of an enterprise. One of these is price. Because some prices are market prices and others are fixed prices, profits may not correspond to the success of management or productivity of workers. Also profitability varies widely across industries. One reason for the new industrial and commercial taxes is to equalize profit rates so enterprises with low profits due to artificially high input prices or low

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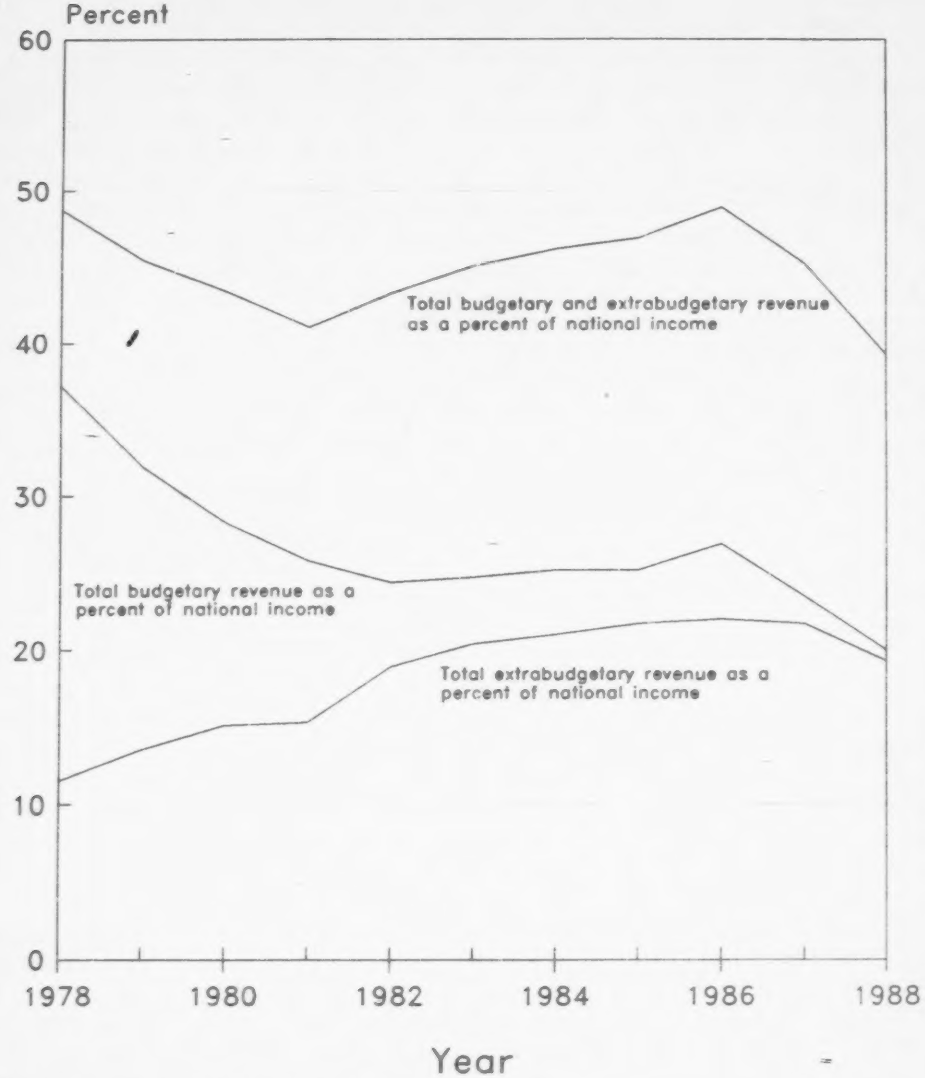
[12] Before 1987 other forms of enterprise responsibility existed, such as the "enterprise fund" and the "profit and loss" responsibility system. The main purpose of these earlier forms was to give enterprises financial resources with which to reward workers. In these forms the amount of funds an enterprise could retain was tied to variables other than profitability per se, such as the size of their wage bill (*Jingji xue wenti* [Problems of Economic Study] no. #1 (1988):15; *Jingji wenti tansuo* [Inquiry into Economic Problems] no. #12 (1988):49-56).

[13] The distinction between "small" enterprises and others varies depending on whether the firm is involved in industry and transport, retail sales, or other services, and whether it is located in Beijing, Tianjin, and Shanghai or elsewhere. The definitions are based on a range of values of fixed assets, size of earnings, and number of people employed. The specifics can be found in Sun Shuming and Zheng Li, "Guoying chiye lirun fenpei de falu guiding" [Legal regulations of state enterprise profit distribution], *Jingji wenti tansuo* [Investigations of Economic Problems] no.12 (1988):51.

Figure 6. Total Budgetary and Extrabudgetary Revenue as a Percentage of National Income: 1978–1988



Source: ZGCZTJ, pp. 12, 103, and 173.

Note: Budgetary revenue data exclude bonds.

output prices will not be discouraged from improving efficiency.[14] In this way economic reform can go forward without having to wait for full-scale price reform. Prices will still influence consumption, but their effect on investment and production decisions can be adjusted.

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[14] For a discussion of how the product tax can be used to influence price while controlling profitability in Chinese enterprises, see Wang Chuanlun, "Some Notes on Tax Reform in China," *China Quarterly* no. #97 (March 1984):53–67.

Without price reform, however, the tax-contract system in effect makes all taxes negotiable, and therefore ad hoc. In addition, adjusting taxes for each enterprise is unwieldy, and is hindered by poor accounting, negotiation, and corruption. Therefore the overall, long-run effect of tax and enterprise reform on government revenue is difficult to predict. On the one hand provisions to allow enterprises to keep higher shares of incremental profits should encourage enterprises to increase sales and reduce costs; on the other hand, the combined effects of negotiation, incentives to reduce accounting profits, and administrative costs may overwhelm the increases in revenue due to incentives to increase profits.

VI. ECONOMIC PERFORMANCE AND REVENUE GROWTH

The *li gai shui* tax reform has been concerned with making state enterprises efficient and dynamic by subjecting them to the same taxation system as collectives. The achievement of these goals, however, has been undermined by other factors that have adversely affected the performance of state enterprises. For example, inflation in the late 1980s, also a result of economic reform, hurt state enterprises more than others because they are subject to fixed state prices and cannot pass on increased costs. This decreased profits in state enterprises and increased the amount of revenue used for subsidies.[15] Also, attempts to control budgetary expenditure by cutting investment curtailed growth in the state sector, and industry in particular. Investment is a large expenditure, and is easier to cut in major central projects than in smaller, local projects.

Failure to make state enterprises more efficient and dynamic has affected government revenue, especially since industrial and commercial taxes are such a large revenue source. This can be seen in Table 4, which gives the share of revenue collected by ownership category. The figures in this table show that the state sector's share has fallen from 86.8 percent in 1978 to 74.1 percent in 1987. Table 5, which gives the share of revenue collected by economic sector, shows that concurrently industry's contribution to budgetary revenue has also fallen. Industry's share was 75.4 percent in 1978, and only 56.9 percent in 1987. While industry's share was falling, the category of "other" rose from 2.1 percent to 20.9 percent during the same period, as this is where bond revenue is counted. Contributions from the other economic sectors remained about the same. This implies that decreases in revenue from state industry have been largely made up by issuing bonds.

CONCLUSION

Implementation of the *li gai shui* system is the core of China's efforts to establish a legal, uniform tax system, which gives enterprises autonomy from government and incentives to care about

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[15] Enterprise subsidies were 44.6 billion yuan in 1988, up from 24.52 billion in 1985 (the first-year figures for these subsidies were made available). Price subsidies increased from 1.1 billion yuan in 1978 to 31.7 billion yuan in 1988 (*ZGCZTJ*, pp.17, 88, 197).

Table 4. Percentage of Revenue Collected by Ownership Category: 1978-1987

Year	State	Collective	Individual	Other
1978	86.8	12.7	0.5	0.0
1979	86.5	13.0	0.5	0.0
1980	85.4	14.0	0.6	0.0
1981	84.4	14.7	0.9	0.0
1982	81.6	15.1	3.3	0.0
1983	80.1	16.0	3.0	0.9
1984	78.9	17.2	2.8	1.1
1985	71.6	23.1	4.3	1.0
1986	77.1	16.9	4.1	1.9
1987	74.1	18.4	4.5	2.4

Source: ZGCZTJ, p. 25.

their economic performance. Budget deficits have increased since the introduction of reforms and the share of revenue contributed by state enterprises has fallen, but there is no evidence that tax reform is to blame for these developments. Meanwhile the new system has replaced enterprise remittances with tax revenue, and shares of budgetary and extrabudgetary revenue appear to have stabilized.

One unresolved issue is whether sufficient incentives have been introduced to increase profits and tax revenue. The success or failure of tax reform in this regard cannot be determined yet because the effects of the tax system cannot be separated from the results of other economic reforms being introduced at the same time. However, the intent of establishing a uniform, nonarbitrary tax code has been potentially undermined by the tax-contract system.

Another test of the success of tax reform will come when the new policy instruments are used to resolve problems that arise in the future. If tax policy is not adequate, will central leaders fall back on directives?

So far China's leaders have not passed this critical point. Economic austerity measures in the fall of 1988, and panic directives after economic disruption caused by the student demonstrations in June 1989, are cases in point. Nonetheless, economic reform is still on the agenda, and a new tax system is in place. That Chinese leaders have concerned themselves with these important aspects of the economy is reason for optimism.

Table 5. Percentage of Revenue Collected by Economic Sector: 1978-1987

Year	Industry	Agriculture	Commerce	Transport	Construction	Other
1978	75.4	2.8	12.2	7.3	0.2	2.1
1979	78.8	2.9	4.7	7.7	0.0	5.9
1980	82.7	3.0	1.5	6.5	0.1	6.2
1981	81.9	3.5	0.3	5.8	-0.1	8.6
1982	84.0	4.4	-3.7	4.6	0.1	10.6
1983	86.0	5.4	-7.9	5.7	0.9	9.9
1984	77.8	4.1	-0.8	8.3	0.4	10.2
1985	64.0	4.7	7.7	7.0	0.4	16.2
1986	56.1	3.6	14.7	5.4	1.0	19.2
1987	56.9	5.1	11.5	5.2	0.4	20.9

Source: ZGCZTJ, p. 33.

PROVINCIAL ECONOMIC DIFFERENCES DIMINISHED IN THE DECADE OF REFORM

By David L. Denny *

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SUMMARY

When China's decade of economic reforms began in 1978, there was widespread concern that the reforms—including increased foreign trade, greater foreign investment and economic assistance, and increased freedom for private economic activities—would increase the disparity in development and income levels between China's "rich" and "poor" provinces.

Despite these expectations, China's decade of economic reform did not produce an ever widening gap between the economic performance of the "have" and the "have not" provinces. As measured

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by per capita net material product,[1] the economic disparities that had previously separated rich and poor provinces actually narrowed.

That economic reforms and the open door policies produced greater equality of economic performance in the provinces is, at first, quite a surprising result. After all, in order to increase incentives and economic efficiency, Deng Xiaoping and his pragmatic colleagues are quite rightly credited with introducing a more benign attitude toward increasing income differentials.

'Trickle down' economics, while perhaps effective at promoting savings and effort, is not usually credited with quickly promoting a more equitable structure of economic benefits. Moreover, China's greater emphasis on foreign trade, the aggressive solicitation of private foreign investment, and the activity of multilateral and bilateral lending institutions combined to increase concerns that foreign resources would gravitate to those parts of China already well endowed with sophisticated manpower as well as relatively modern transport and telecommunications systems. Finally, the weakening of central control over key aspects of the economy created doubts about the ability of the central government to redistribute resources from richer to poorer regions. [2]

In practice, however, many of the reasons for believing that provincial economic disparities would widen were exaggerated. The expansion of foreign trade opportunities did not work to the relative advantage of the well developed provinces that effectively monopolized China's foreign trade in the past. Foreign investment was more widely dispersed than is commonly believed but, more importantly, the activity of foreign lending agencies partially offset the tendencies of investors to locate in well developed provinces. And while central planners lost substantial control over fiscal resources, the central government retained its ability to subsidize the budgets of poor provinces from the coffers of the rich.

But the most important reason appears to be that the reforms allowed natural patterns of economic development to re-emerge. At least in the decade of the 1980's, this more natural pattern of regional economic development replaced the extremely irrational—and, in the final analysis, counterproductive—emphasis on egalitarianism that had characterized the Maoist Era.

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[1] Net material product (the net value of all material producing sectors) is a better measure of ecnonomic performcance than the commonly used gross value output statistics. Nevertheless, NMP statistics systematically undervalue the service intensive economies such as those of Beijing and Shanghai. Unfortunately, at the provincial level the more satisfactory and comprehensive measures of economic activity (GNP/GDP) have only become available in the last few years {For example, *Zhongguo Tongji Zhaiyao ,1990* (A Statistical Survey of China), Beijing, May 1990, p.6.}.

[2] A recently published paper provides a useful survey of these ideas and their expected impact on regional economic differences. The author, like most previous researchers, concludes that "in essence, uneven regional development may characterize China's development strategy for quite some time to come despite the government's faith in the diffusion effect of growth". Dali Yang, "Patterns of China's Regional Development Strategy", *China Quarterly*, No. 122, June 1990, p. 251. Space does not permit a full discussion of the reasons for the differences between Mr. Yang's conclusions and those of the present paper. They are due partly to a different choice of statistics (NMP vs. GVIO), different targets for the comparison (provinces as opposed to large regional groupings) and different time periods. Another significant difference is that this paper focuses on what actually happened to the broadest measure of economic performance during the *past* decade while much of Mr. Yang's focus is on the regional allocation of new investment (and by implication what may happen *in the future*.)

While no single theory can completely explain the narrowing of gaps in per capita economic performance during the decade of reforms, this paper describes the course of comparative provincial development over the 1978–88 decade and examines several factors affecting the observed pattern.

I. PROVINCIAL DISPARITIES NARROW

Figure 1 shows that provincial economic growth during this decade bore no simple relationship to the provinces' richness or poorness at the beginning of the period. Indeed, during the 1978–88 decade provinces that were relatively poor at the beginning of the decade tended to grow more rapidly than the richest provinces.

Twenty-eight Chinese provinces (all except Tibet and newly formed Hainan) are arrayed from left to right in Figure 1. Their per-capita products in 1977—the year prior to the beginning of the decade of reform—are depicted by bars which decline from Shanghai's per capita NMP of 1918 Yuan to the 127 Yuan registered in the same year by Guizhou.

If the richer provinces had grown relatively rapidly during the decade, the growth of the provincial economies would have followed the same general trend—and could be represented by a progressively declining line. But the actual result—depicted by the line labled 1978-88 Growth rate—was quite different. The actual growth rates varied substantially around the national average (the horizontal line in Figure 1) but there was certainly no systematic tendency for provincial growth rates to decline as one moves from left to right (i.e. from rich to poorer provinces).

In fact, the five poorest provinces at the beginning of the decade had, on average, higher growth rates than the five richest provinces. But the highest growth rates were achieved neither by provinces that started off "rich" nor "poor" but by those that began the decade in the middle[3]. As a result, as will be demonstrated below, both middle and poorer provinces in China gained on the richest provinces.

While Figure 1 shows substantial differences in the rates of provincial economic growth (from Zhejiang's 14.9 percent per year to Heilongjiang's 7.1 percent), even the slowest growing Chinese province turned in an economic performance that most countries would envy. China as a whole grew extremely rapidly during the decade and the fruits of economic growth, while quite varied across the broad expanse of China, were, nonetheless, widely shared.[4]

Figure 2 "normalizes" the economic status of each province by calculating per capita net material product in relation to the na-

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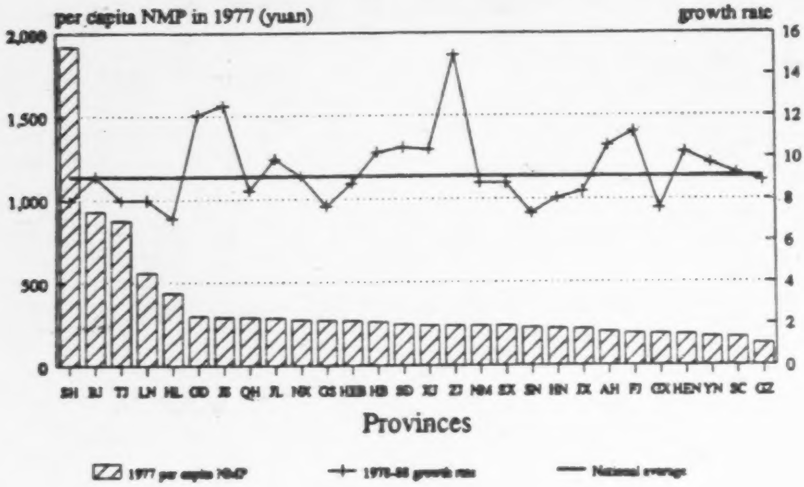
[3] These trends were described earlier by the author in "Equalizing Opportunity", *China Business Review*, September-October, 1987, p. 4.

[4] About half of the provinces turned in performances that were consistent throughout the decade. That is to say, their NNP growth consistently lagged behind the national average (five provinces inlcuding three with initially high per capita incomes—Shanghai, Tianjin and Heilongjiang) or were consistently higher than the national average (nine provinces including star performers such as Zhejiang, Jiangsu, Fujian and Guangdong).

However, six provinces (Beijing plus six of the poorer provinces) did well during the first part of the period but fell behind in the second part of the period. Finally, eight provinces turned in a sub par performance during the 1978–83 provinces but then proceeded to accelerate during 1983-88. The eight provinces in the latter category are: Liaoning, Hebei, Shandong, Jiangxi, Shaanxi, Gansu, Qinghai and Ningxia.

Figure 1
Provincial Per Capita NMP in 1977 and Average Annual Growth Rates 1978-88



Data table

Province and code		Per capita NMP in 1977	Growth rate 1978-88
Shanghai	SH	1,918	7.95
Beijing	BJ	927	9.06
Tianjin	TJ	873	7.96
Liaoning	LN	560	7.96
Heilongjiang	HL	437	7.09
Guangdong	GD	297	12.05
Jiangsu	JS	289	12.51
Qinghai	QH	287	8.40
Jilin	JL	284	9.92
Ningxia	NX	273	9.09
Gansu	GS	271	7.64
Hebei	HEB	267	8.73
Hubei	HB	261	10.23
Shandong	SD	246	10.46
Xinjiang	XJ	239	10.37
Zhejiang	ZJ	237	14.91
Nei Monggol	NM	237	8.76
Shanxi	SX	236	8.74
Shaanxi	SN	226	7.31
Hunan	HN	219	8.02
Jiangxi	JX	217	8.35
Anhui	AH	198	10.56
Fujian	FJ	190	11.23
Guangxi	GX	186	7.55
Henan	HEN	184	10.25
Yunnan	YN	168	9.71
Sichuan	SC	166	9.24
Guizhou	GZ	127	8.87
National average		290	9.09

Source: see appendix

tional average (which is set equal to 100). Thus, Shanghai's per capita net material product of 1918 in 1977 is transformed into 685 after it is divided by the national average of 290 and multiplied by 100. This calculation was made for each province for the year prior to the decade of reform (1977) as well as for the final year (1988).

The result is an unambiguous and consistent shift towards greater provincial economic equality during the period. The fairly steep slope of the curve in 1977 (falling from Shanghai's normalized per capita NMP of 685 yuan, or 6.9 times the national average, and more than 15 times Guizhou's per capita product of 45.4 yuan) is replaced by a substantially flatter curve in 1988. As shown in Figure 2, the five wealthiest provinces at the beginning of the period lost ground relative to the national average, while the five least prosperous provinces all gained ground.

Analysis of the relationship between the average per capita NMP and its standard deviation leads to the same conclusion. As Table 1 shows, the variance of provincial per capita net material product declined throughout the period. It was highest in 1977, declined between 1977 and 1983, and declined again between 1983 and 1988.

This review of the empirical data makes it clear that the per capita net material products of China's provinces did not become increasingly unequal during the decade of reform. In fact, there was a notable tendency for the economic performance of the provinces to become more equal.

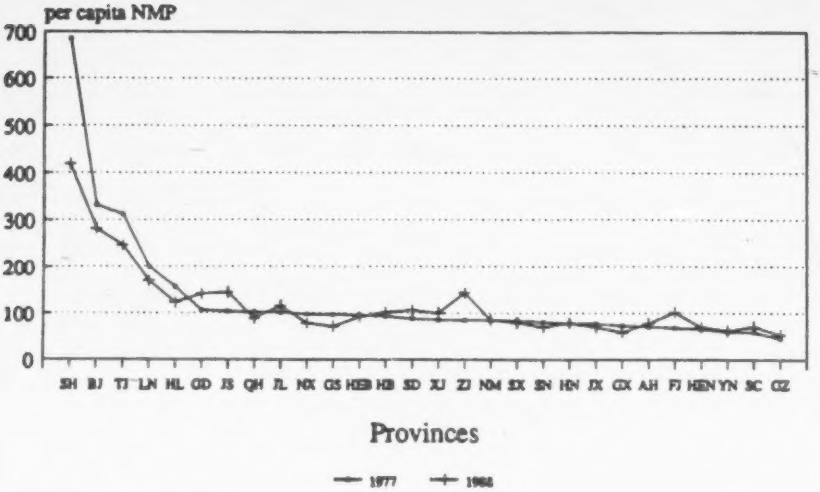
But describing *what* happened during this tumultuous decade is much easier than explaining *why* it happened. What are the factors that led to the closing of the gap of per capita net material product? To what extent are they based on fundamental economic factors? To what extent did political power play a role in bringing about this trend towards a more egalitarian regional distribution of economic power? Are these trends susceptible to any consistent explanation or explanations, or do the results merely reflect a myriad of events caused by unpredictable human and natural phenomena?

To answer these questions would require a major research effort. The rest of this brief paper will only proceed a small part of the way towards that goal. Factors such as the power of the central government to redistribute budgetary resources, the impact of the open door policy, and the move away from the previous period's emphasis on regional self-reliance will be reviewed.

II. INTER-PROVINCIAL BUDGETARY TRANSFERS

Much has been made of the erosion of the capacity of China's governmental units at all levels to generate revenues. Between 1978 and 1988, the revenues of governments at all levels grew at an annual average rate of 8.7 percent, failing, however, to keep pace with economic growth. As a proportion of NMP, fiscal revenues declined from 37.3 percent in 1977 to 22 percent in 1988. This decline in revenue-generating capacity has led to concerns that the Chinese government will be unable to continue to fulfill such traditional functions as funding large infrastructure investment projects and transferring budgetary resources from richer to poorer provinces.

Figure 2
Normalized Provincial Per Capita NMP
comparison of 1977 and 1988



Data table

Province and code		1977	1988
Shanghai	SH	685.0	419.0
Beijing	BJ	331.3	282.1
Tianjin	TJ	311.8	246.7
Liaoning	LN	200.0	169.8
Heilongjiang	HL	156.1	123.1
Guangdong	GD	106.1	141.1
Jiangsu	JS	103.2	144.3
Qinghài	QH	102.5	88.6
Jilin	JL	101.4	115.2
Ningxia	NX	97.5	78.5
Gansu	GS	96.8	71.5
Hebei	HEB	95.4	91.6
Hubei	HB	93.2	101.3
Shandong	SD	87.9	105.8
Xinjiang	XJ	85.4	100.3
Zhejiang	ZJ	84.6	143.2
Nei Monggol	NM	84.6	85.4
Shanxi	SX	83.9	80.0
Shaanxi	SN	80.7	70.2
Hunan	HN	78.2	78.8
Jiangxi	JX	77.5	69.7
Guangxi	GX	72.9	58.7
Anhui	AH	70.7	77.5
Fujian	FJ	67.9	101.3
Henan	HEN	65.7	69.9
Yunnan	YN	60.0	62.5
Sichuan	SC	59.3	70.5
Guizhou	GZ	45.4	53.7

Source: see appendix

TABLE 1. Variation of Provincial Per Capita NMP

	1977	1983	1988
Average of Provincial Per Capita NMP	352.5	595	1180.1
Standard Deviation	364.2	477.5	870.8
Std. Deviation/Average	1.03	0.80	0.74

In addition to the decline in the government's ability to generate fiscal revenues, the expenditures of the central government also declined in relation to expenditures of local governments. The rate of growth of central government expenditures during the decade was 7.1 percent compared to the 10.7% growth of local government expenditures. Since the central government has in the past aggressively used its control over capital construction funds to transfer resources from richer to poorer provinces, one may presume that the decline in the central government's fiscal expenditures probably hit the poorer areas particularly hard. For example, the official estimates of the provincial distribution of fixed asset investment shows a substantial decline in the share of national investment funds going to the poorer provinces in the deep interior regions.[5]

These very significant fiscal changes during the decade of reform raise complex questions of analysis and interpertation. A complete understanding of the fiscal relationships affecting the various provinces would have to assess the regional impact of the central government's own expenditures and analyze which provinces bear the burden of the taxes that are allocated directly to the central government. The growing role of "extra-budgetary" revenues and expenditures would also have to be assessed. Such questions are beyond the scope of this paper.

Fortunately, it is not necessary to assess all aspects of China's fiscal system or how the fiscal system may have changed over time. For the purpose of this paper it is sufficient to show that despite the central government's decline in authority over the period, it still retained sufficient power at the end of the period to affect significant budgetary transfers from rich to poor provinces. The conclusion that the government budget is still an important vehicle for tranferring resources from richer to poorer provinces will, at first, seem inconsistent with the central-local fiscal relationships sketched in Figure 3. As the three graphs show,there has been a substantial change in the division of China's revenues between the central and local governments. Central governent revenues have grown much more rapidly than local government revenues.[6] On the other hand, the expenditures of local governments have grown much more rapidly than the expenditures of the central government.

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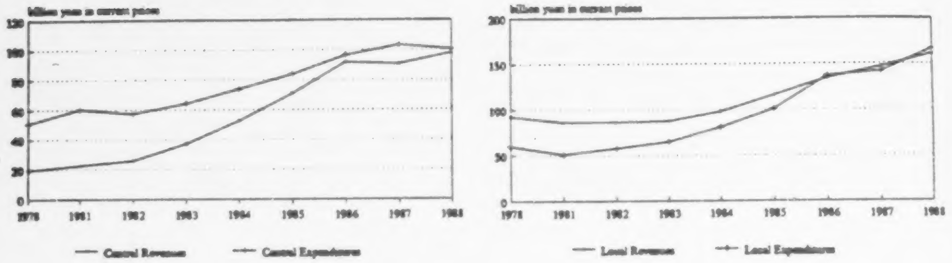
[5] China State Statistical Publising House, *Zhongguo Guding Zichan Touzi Tongji Ziliao (Statistical Materials on Fixed Asset Investment in China)*, Beijing, 1989, p. 23.

[6] As will be discussed below, China's fiscal system is based on "unitary" principles. Nearly all tax rates and tax bases are determined by the central government. Similarly, in theory, the central government also determines the appropriate types of expenditures to be made by local and central governments. In such a system, "local" revenues are not determined solely by local authorities nor do they have complete control over their usage. In fact, under China's fiscal system some local governents are required to hand over some of their "local" revenues to the central government. Despite these facts, the classification of some revenue sources as "local revenues" appears to imply some degree of de facto "entitlement" to such revenue sources. For example, all "local" revenues are included in the provincial budgets—even though some portion must be shared with the central government.

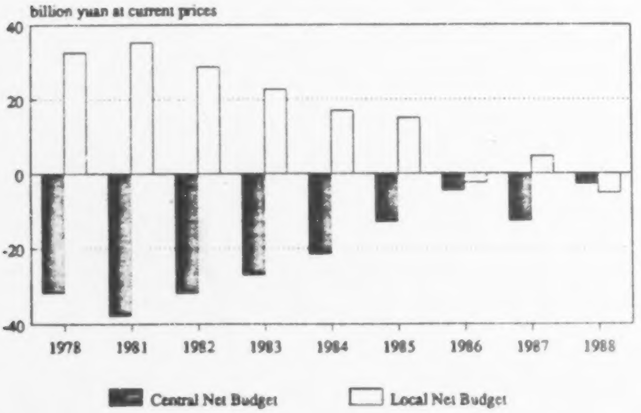
Figure 3
Central and Local Government Budgets



3a. Central Budget Trends
1978, 1981-88

3b. Local Budget Trends
1978, 1981-88

3c. Central, Local Deficits & Surpluses
1978, 1981-88



Source: see appendix

As a result of these trends, central government revenues now provide nearly enough funds to pay for central government expenditures (Fig 3A). The large central government budget deficit (Fig 3C) that existed at the beginning of the decade (which was offset by revenues collected by local governments and transferred to the center) has been all but eliminated.[7] Similarly, the combined budget surplus of all local governments has been systematically elminated (3C) as expenditures have been allowed to increase much more rapidly than local revenues (Fig 3B).

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[7] This section relies on Chinese official statistics on central and provincial revenues, expenditures and deficits. On a normal "IMF Basis", revenues are overstated (and the deficit is understated) because the Chinese practice is to include governmental revenues from domestic and foreign borrowing as part of budgetary revenue.

Such a trend has potentially far-reaching implications for the future. At present, however, local government finance has not been cut loose and placed on a "pay as you go basis". A recent World Bank comprehensive study of China's fiscal system emphasizes that the Chinese fiscal system remains based on "unitary" principles in which local budgets are subordinated to and included within the national consolidated budget.[8]

The amalgamation of local budgets into the consolidated national budget is not simply for accounting convenience. Rather it reflects the fact that the central government has control or at least strong influence over revenues and expenditures at all levels of government. The central government determines the tax base and tax rates that local governments are allowed to use. The center also determines local expenditures in a fair amount of detail. Finally, the local and central governments bargain over what portions of local revenues must be turned over to the center.

The result, as will be shown below, is a system in which local expenditures were not tightly linked to local revenues at least for the 1978–88 period. There are, however, good reasons to believe that the linkage between revenues and expenditures increased during the decade. In particular, the revenue "contract responsibility systems" introduced at the very end of the period will increase the ability of local governments to retain revenues when they collect more than they have contracted for. However, detailed information on the new systems, such as how many provinces are covered and how the contracts have worked in practice, is not available. In any case, the introduction of such reforms so late in the decade was not a key factor in influencing provincial economic performance during the period.[9]

In a broad sense, China's fiscal system during the decade of reform maintained some of the features described by Lardy who concluded that in the 1950's there was an "absence of a link between local revenues and expenditures".[10] Lardy attributed this to the fact that "the center imposes a unified tax system and also continues to control the budgetary expenditures of local governments." [11]

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[8] *China: Revenue Mobilization and Tax Policy*, (A World Bank Country Study), Washington D.C., 1990). The report contains a wealth of data and insightful analysis about the fiscal relations between the central and local governments. The unitary nature of the Chinese system is described on page 240: "By comparison with most countries of the world, local governments in China have little formal independence in matters of structuring their tax system or deciding on the level and composition of expenditures." Nevertheless, the report goes on to emphasize that local governments influence taxes and expenditures through negotiations with the central government and through their ability to adjust tax obligations of their subordinate units. As a result, "provincial governments do indeed have significant room to adjust fiscal decisons to local needs and preferences (pp. 245–46).

[9] The absence of a tight link between provincial revenues and expenditures during the decade should be qualified by the fact that throughout the decade fiscal reforms were introduced that tended to increase the linkage. This was done to give provinces greater incentives to increase revenues. At the very end of the period, new revenue contract responsibility systems were negotiated between the central and local governments. In some cases, this may have had the effect of allowing at least some of the provinces to retain all or most of their revenues over their "contracted" responsibilities. The World Bank has expressed concerns over the implications of these changes: "an important implication of these shifts is that the central government's ability to use discretionary policy to redistribute among provinces, or to centralize national finances, is much more limited.", *Revenue Mobilization and Tax Policy*, p. 93.

[10] Nicholas Lardy, *Economic Growth and Distribution in China*, Cambridge University Press, 1978, p. 169.

As a result of its influence over local government finance, the central government was still able to transfer significant fiscal resources from rich to poor provinces even at the end of the decade of reform. Table 2 indicates that in 1988, only 7 of China's provinces compiled budget surpluses, which totalled 19.5 billion yuan. These budget surpluses offset the combined budget deficits of 24.8 billion yuan in the remaining 23 provinces.

Since the central governments' own revenues were almost evenly balanced with central expenditures, central government revenues were not the source of funds to offset the red ink in the 23 deficit provinces. In addition, local governments are not supposed to run deficits and can borrow only under very restrictive conditions.[12] Finally, in a few cases such as Shanghai, corroborative evidence exists to indicate that the budget surpluses roughly approximate the local revenues that local governments were required to turn over to the center.[13]

Table 2 also indicates that the size of the financial transfers was substantial. Shanghai's surplus, for example, was nearly 60% of its budget revenues—even so Shanghai must have had trouble meeting its obligation to transfer 10.5 billion yuan to the central government.

Moreover, as late in the decade as 1988, many of the poorer provinces continued to run extremely large budget deficits in relation to their own revenues. Six provinces (Tibet, Qinghai, Ningxia, Xinjiang, Hainan and Inner Mongolia) ran deficits larger than their revenues. Another seven provinces ran deficits exceeding one quarter of their own revenue sources. The shortfalls were met by drawing upon budget surpluses amassed by Shanghai, Beijing, Tianjin, Liaoning, Jiangsu and Zhejiang. In other words, the budget surplus provinces were six of the seven richest provinces in China. Budget deficit provinces on the other hand were generally the poorer provinces.

There are some interesting exceptions to the general rule that the richest provinces ran budget surpluses that provided fiscal funds for the poorest provinces. Guangdong is ranked sixth among China's richest provinces but ran budget deficits from 1986 to 1988. Guangdong's 1988 budget deficit reached 7% of its local revenues. This appears to be due to the special consideration the center has granted Guangdong since the beginning of the reform period.

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[11] Lardy, *Economic Growth and Distribution*, p. 169.

[12] World Bank, *Revenue Mobilization and Tax Policy*, p. 87.

[13] In Zhuang Xiaotian's "Report on Shanghai's 1988 Final Budget Accounts" (*CHINA (?)*,Joint Publicaton Research Service, CAR-89-063, p. 26), he says that "total local revenue was 15,337 million yuan (which overfulfilled) the budgeted revenue and thus accomplished the contracted task of turning 10.5 billion yuan to the central authorities". As reported in Table 2, Shanghai's 1988 budget surplus was 8.9 billion yuan. As emphasized in the text, budget surpluses and deficits only approximate the required revenue transfers to and from the consolidated government budget. Comparison of provincial 1988 budget surpluses and deficits and the World Bank's description of revenue sharing formulas (World Bank, *Revenue Mobilization and Tax Policy*, p. 89) demonstrates that the budget surpluses (deficits) are consistently smaller (larger) than the amount of revenue transfers called for under the sharing formulas. Part of the reason for this divergence appears to be the fact that the central government funds specific line item expenditures included in provincial government budgets.

TABLE 2

Provincial Budget Surpluses (+) and Deficits (-) in 1988

	Surpluses and Deficits	Surplus/Deficit as % of Budget Revenues	Per capita NMP: Provincial Rank
Shanghai	+8.892	57.91%	1
Jiangsu	+3.651	31.61%	7
Zhejiang	+2.242	26.21%	5
Liaoning	+2.070	17.80%	4
Beijing	+1.518	22.28%	2
Tianjin	+0.980	21.91%	3
Hubei	+0.172	2.47%	12
Hebei	-0.273	0.42%	15
Shandong	-0.356	3.95%	10
Anhui	-0.427	10.09%	21
Shanxi	-0.445	11.40%	18
Hainan	-0.518	122.17%	14
Henan	-0.624	8.92%	25
Fujian	-0.692	17.23%	11
Guangdong	-0.763	7.09%	6
Ningxia	-0.875	172.58%	20
Qinghai	-0.921	181.66%	16
Jiangxi	-1.006	31.14%	26
Hunan	-1.010	18.43%	19
Guizhou	-1.018	39.21%	30
Tibet	-1.048	-	27
Shaanxi	-1.071	31.62%	23
Gansu	-1.140	45.64%	22
Heilongjiang	-1.147	18.33%	8
Sichuan	-1.261	14.45%	24
Yunnan	-1.431	28.32%	28
Jilin	-1.794	41.41%	9
Guangxi	-1.939	57.23%	29
Xinjiang	-2.345	151.68%	13
Inner Mongolia	-2.688	111.40%	17

Source: 1989 Zhongguo Jingji Nianjian (1989 Almanac of China's Economy), Part IV, pp. 1-251, and various 1989 Provincial Yearbooks

Guangdong needs to build its infrastructure rapidly to play its role in attracting foreign investment as well as to present a prosperous face toward Hong Kong. For this reason, Guangdong appears to have been exempt from large budget transfers to the central government budget.

Jilin and Heilongjiang also rank among the top ten in terms of per-capita NMP but still ran substantial deficits. A more careful study of these provinces is needed, but one of the possible conclusions may turn out to be that the poor performances in Jilin and Heilongjiang were due to the increasing losses of state-owned enterprises—which account for a particularly large share of economic activity in the Northeast.

Finally, the provinces that were subsidized most heavily were Tibet, Qinghai, Ningxia, Xinjiang and Inner Mongolia. In addition to being relatively poor, these provinces tend to have large populations of ethnic minorities, they are located on sensitive borders (except for Qinghai), they are sparsely populated and their areas are thought to contain significant underground natural resources. Such factors have forced the central government to place a special emphasis on promoting social stability and economic development in these provinces.

How did these trends affect per capita governmental expenditures in the poorer provinces relative to the richer ones? Were the richer provinces acquiring greater budgetary resources while the poorer provinces were havng a tougher time keeping up?

This question cannot be answered definitively without a detailed study of the regional distribution of central government expenditures, an analysis of extra-budgetary expenditures and the inter-relationship between central and local government expenditures. Nevertheless, Figure 4 takes a step in that direction by providing information on per-capita local government expenditures. The evidence indicates that the poorer provinces ended the decade in a relatively better position to support local expenditures than they were in at the beginning of the period.

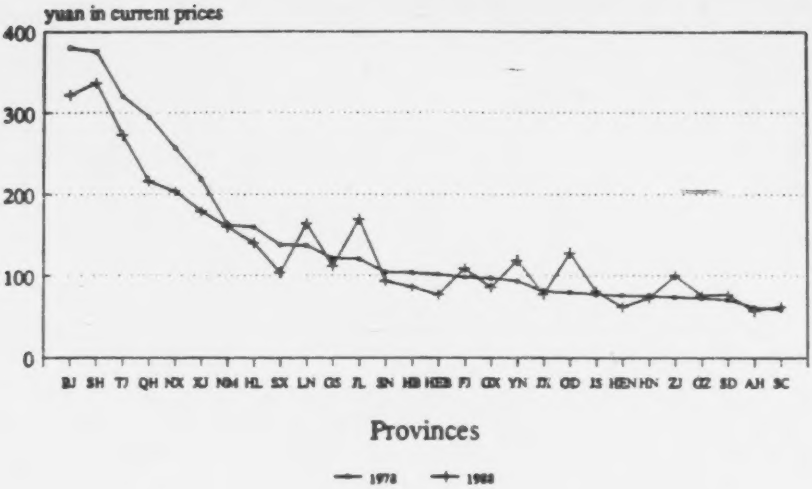
Figure 4 and the accompanying data show that nine of the top ten provinces in terms of per capita local expenditures suffered declines in per capita budgetary expenditures relative to the national average. By contrast, six of the ten provinces that began the period with the lowest per capita local government expenditures improved their relative position by 1988.

As a result, despite the general weakening of the fiscal system, the increasing power of local governments, and the new systems that left a portion of incremental tax collections in local hands, budgetary transfers remained an important mechanism whereby the richer rgions of China provided assistance to poorer areas. And poorer provinces ended the period in a relatively better position in terms of their ability to finance per capita expenditures from local budgets.

III. THE IMPACT OF THE "OPEN DOOR" ON REGIONAL ECONOMIC INEQUALITY

Western and Chinese analysts have both been concerned that China's new policies towards foreign economic relations might exacerbate regional inequalities. These fears appear to have been exaggerated. This is not to say that the fruits of the open door have been distributed evenly throughout China. Indeed, it is quite obvious that in most respects the coastal regions have been much better positioned to seize the opportunities that the open door policies created. Nevertheless, when one takes a comprehensive view of all aspects of the new foreign economic policies, it is clear that the

Figure 4
Normalized Per Capita Expenditures
comparison of 1978 and 1988



Data table

Province and code		1978	1988
Beijing	BJ	380.6	321.9
Shanghai	SH	375.5	336.7
Tianjin	TJ	320.2	272.9
Qinghai	QH	295.4	216.3
Ningxia	NX	257.2	204.2
Xinjiang	XJ	219.1	179.4
Nei Monggol	NM	162.5	160.2
Heilongjiang	HL	159.7	140.5
Shanxi	SX	138.1	103.8
Liaoning	LN	137.3	163.8
Gansu	GS	121.6	112.0
Jilin	JL	120.6	169.7
Shaanxi	SN	104.4	93.5
Hubei	HB	103.9	86.3
Hebei	HEB	101.6	76.6
Fujian	FJ	97.8	108.8
Guangxi	GX	96.8	85.7
Yunnan	YN	93.7	118.6
Jiangxi	JX	81.0	77.2
Guangdong	GD	79.4	127.8
Jiangsu	JS	77.1	80.7
Henan	HEN	75.8	61.9
Hunan	HN	75.1	72.4
Zhejiang	ZJ	73.7	99.5
Guizhou	GZ	72.6	76.0
Shandong	SD	70.6	76.4
Anhui	AH	61.2	57.0
Sichuan	SC	58.3	62.1

Source: see appendix

benefits of the much greater foreign economic relations have been spread quite widely—even to the far interior regions of China.

A. FOREIGN TRADE

The foreign trade system that preceded the open door reforms substantially favored the ports and coastal provinces. Prior to the decade of reforms, the coastal provinces undertook almost all of China's foreign trade. Even though the central government formally monopolized most foreign trade decisions and allowed little foreign exchange to remain in the hands of local officials, the coastal areas derived enormous benefits from shipping and port activities and from establishing export processing ventures. The success of such undertakings was based, in large part, on sourcing low-priced raw materials from inland provinces.

Foreign trade reforms in the late 1970s and in the early 1980s[14] loosened the grip of the central government and the coastal areas on the procurement of foreign trade goods. Provinces were allowed to deal directly with foreigners through their own foreign trade companies. Perhaps more importantly, local branches of the Ministry of Foreign Economic Relations and Trade (MOFERT) foreign trade companies increasingly came under the influence of local officials. One result was that when inland provinces sent products out through the ports, they increasingly did so on a commission basis and retained control over decisionmaking and contracting.

This was not necessarily rational from an economic point of view. In many cases it led to reverse protectionism. Provinces surrounding Shanghai, for example, built their own industries that in many instances turned out to be less efficient. But the net result was a slower growth of Shanghai's export processing industries and a more rapid buildup of the exports of the inland provinces. Indeed, throughout the 1980s, port cities such as Shanghai, Tianjin and Dalian blamed the poor performance of their exports in part on their inability to obtain access to raw materials and exportable products from interior provinces.[15]

These trends are clearly reflected in provincial trade statistics. They show that exports of most of the important exporting provinces (those that exported more than $500 million in 1980) grew much less rapidly than the national average (national exports increased by 2.6 times between 1980 and 1988). For example, Shanghai's exports grew by less than 8.7 percent in 8 years, Tianjin's grew by only 9.1 percent, Liaoning's actually declined by 3 percent and Shandong's were up 69 percent (thanks primarily to the rapid growth of Shengli oil field). The only important traditional exporting provinces that did better than the national average were Guangdong (up 340 percent) and Jiangsu (up 280 percent).

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[14] Chinese sources vary signficantly on when the central government first allowed provinces to have a signficant degree of control over their own foreign trade. Some descriptions allege that certain provinces controlled their foreign trade even prior to the economic reforms of the late 1970's. However, most sources indicate that real self management (ziying) of imports and exports began only in the late 1970's and some provinces did not obtain much control over their foreign trade until the early or mid-1980's. Discussions of provincial foreign trade patterns and strategy are found in the annual economic almanacs (Zhongguo Jingji Nianjian) and the Foreign Trade Almanacs of the Ministry of Foreign Economic Relations and Trade (MOFERT).

[15] A recent article summarized the changes from Shanghai's point of view. "However, when the 1980's arrived, characterized by reform and opening to the outside world, Shanghai not only began to lag far behind Hong Kong and Singapore, ... but its domestic position also began to drop day by day ... The city began to face crises one after another in raw material supply, the sales of its products and its economic performance. Its former economic power and strength was in the process of being overtaken or had already been overtaken by other provinces and cities." Wan Zengwei, "Create a New Situation in Shanghai's Economic Development By Giving Priority to Opening Efforts and Invigorating the Municipal Economy Through Trade", in Foreign Broadcast Information Service, *Daily Report*, August 27, 1990, p. 43.

Inland provinces that had been unable to directly conduct their own foreign trade in previous years took advantage of the new system and rapidly expanded their own exports. Shaanxi exports went up 37 fold in eight years, Xinjiang exports were up by 17.5 times, Anhui's were up 13.9 times, Shanxi's up 21.8 times, Inner Mongolia's up 11 times, Sichuan's up 23 times, Zhejiang's up 6.7 times and Heilongjiang's up 8.8 times.

Exports are, of course, a better measure of the cost than the benefit of foreign trade. Unfortunately, the information on provincial imports is much less comprehensive and well defined. In addition, total imports credited to the provinces account for less than 25 percent of all of China's imports. In contrast, exports attributed to particular provinces have tended to account for 80-90 percent of China's total during the 1980's.

Without a much more detailed study of how the inland provinces were compensated for rapidly growing exports (either in terms of a portion of the national import basket or by receiving better terms of trade for domestically produced commodities), it is impossible to determine how much inland provinces benefitted from these high growth rates of "self-managed" exports. Suffice it to say that the rapid growth of "self managed" exports suggests that the inland provinces had meaningful incentives to rapidly expand their exports.

B. FOREIGN DIRECT INVESTMENT

While foreign investors have concentrated on the coastal provinces and the three major metropolitan areas of Beijing, Shanghai and Tianjin, the inland areas have been more successful at acquiring foreign investment than is commonly realized.

As Figure 5 shows, Beijing, Tianjin, Shanghai, Guangdong and Fujian account for 73.6 percent of all foreign investment contracts and 71.1 percent of the dollar value of investment commitments for which China lists the host province. In fact, Guangdong and Fujian province signed nearly two-thirds of all investment contracts and received nearly 50 percent of the investment commitments.[16]

The remaining coastal provinces (Liaoning, Hebei, Shandong, Jiangsu, Zhejiang, Hainan and Guangxi) account for 18.3 percent of the numbers of investment contracts and 16.6 percent of the dollar value of investment commitments. Only 8.1 percent of all foreign investment contracts and 12.2 percent of the investment commitments have gone to China's remaining 18 inland provinces.

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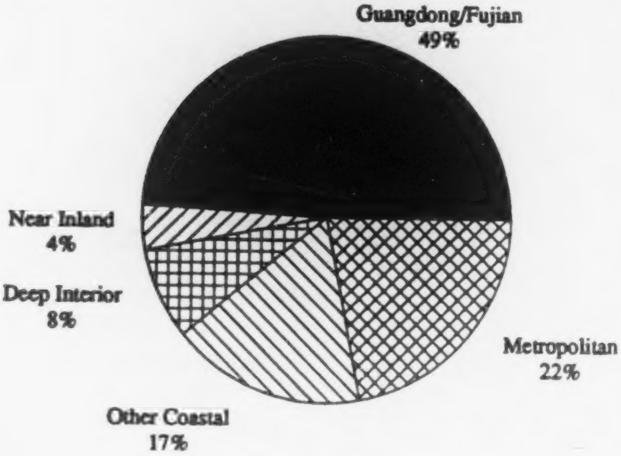
[16] In Figures 5 and 6, Chinese provinces have been divided into five groups. The three metropolitan areas (Beijing, Shanghai and Tianjin) are grouped as "Metropolitan". Guangdong and Fujian are grouped as "S.China/SEZ" reflecting their special priveleges. The other coastal provinces include Liaoning, Hebei, Shandong, Jiangsu, Zhejiang, Hainan and Guangxi. Inland provinces are divided into "Near Inland" and "Deep Interior". Near inland provinces are Anhui, Shanxi, Henan, Hubei, Hunan, Jiangxi and Jilin. Deep interior provinces are: Heilongjiang, Inner Mongolia (Nei Menggu), Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang.

Figure 5
Foreign Investment by Region
by commitment value



1983-1988

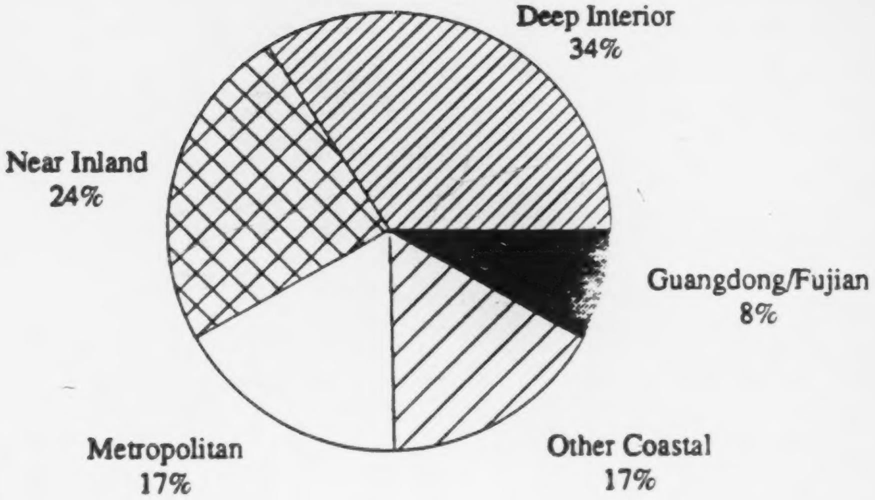
Data table

	Number of FIEs	Commitment Value*
Guangdong and Fujian	10,022	9,239
Metropolitan Areas	1,286	4,251
Other Coastal Provinces	2,805	3,153
Deep Interior Provinces	566	1,578
Near Inland Provinces	683	724
Total	15,362	18,945

* million US dollars

Source: see appendix

Figure 6
World Bank Projects by Region
by commitment value



Data table

	Number of Projects or Major Component	Commitment Value*
Deep Interior Provinces	33	1,990
Near Inland Provinces	26	1,398
Metropolitan Areas	15	999
Other Coastal Provinces	21	965
Guangdong and Fujian	9	475
Total	104	5,827

* million US dollars

Source: see appendix

The fact that the inland provinces have lagged behind the coastal and metropolitan areas in acquiring foreign investment will surprise no one. But the degree of success that inland provinces have had in attracting foreign investors should not be minimized. A surprising number of investors have ventured far from the coastal areas to invest in Central China and even in far Northwest and Southwest China. One hundred thirteen investors have gone into Sichuan, one hundred twenty-four are located in Shaanxi, and ninety-two are located in Anhui.

Even the deep interior provinces had attracted a significant number of investors by the end of 1988. Thirty-seven foreign investors were located in Guizhou; thirty-one made commitments to Yunnan; and thirty were established in Xinjiang.

Private foreign investment interest in China is, to an overwhelming degree, simply a natural extension of the Hong Kong economy across the border into South China. The geographical spread of foreign investment does not appear nearly as skewed if the investment commitments made to Guangdong and Fujian are factored out. Three provinces (Beijing, Shanghai and Jiangsu) have more than five hundred investors; Twelve provinces have between one hundred and five hundred, and only four provinces (Ningxia, Qinghai, Gansu and Tibet) have attracted fewer than thirty private foreign investors.

Obviously one cannot argue that foreign investment has been evenly spread throughout the country. However, the usual picture of the domination by a handful of coastal provinces should be balanced by the fact that every province has attracted some private foreign investment and two thirds of the provinces (including many whose population and economies are much smaller) were able to attract at least 100 foreign investment enterprises.

C. FOREIGN ECONOMIC ASSISTANCE PROGRAMS

A third key element of the open door program was China's decision to solicit aggressively the economic assistance of the World Bank, the United Nations Development Program, and a large number of other multinational and bilateral economic assistance donors. In the space of a decade, these lending agencies have implemented very large scale programs. For example, until the suspension of new projects in June 1989, the World Bank had approved 69 projects with a total loan value of over $8 billion, the benefits of which were spread over an exceedingly large portion of China's territory. Twenty-one provinces acquired at least one major World Bank project located entirely within their borders and at least ten provinces had two projects under their sole jurisdiction.

While it is impossible to determine the final destination of all of the World Bank funds, it is possible to determine the provinces that benefitted from the major components of World Bank projects. Assuming that the benefits are equally shared among all provinces that participate in projects crossing provincial boundaries, it is possible to divide the benefits of World Bank funding among the various provinces.[17]

Figure 6 presents data on the number of projects (or major components) and rough estimates for the value of the loans to metroplitan areas, to Guangdong and Fujian, to Coastal Provinces and to the Near and Deep Interior provinces. A comparison of Figures 5 and 6 reveals the striking conclusion that the World Bank has a regional orientation that is almost exactly opposite that of private foreign investors. Guangdong and Fujian account for about half of foreign investment commitments but have acquired less than 10 percent of the World Bank funds. The inland provinces, however, appear to be capturing about half of the World Bank projects as compared to just over 10 percent of private foreign investment.

The regional spread of the World Bank program suggests that there are powerful pressures on both the international organizations and on Chinese officials to distribute the benefits of the programs reasonably widely.

IV. SPREAD EFFECTS: A RETURN TO A MORE NORMAL PATTERN

In previous sections, I have argued that the relatively even distribution of economic performance during the decade was, in part, related to the fact that the Central Government was able to control and utilize strong levers to influence the pattern of economic growth. Budget resources were re-allocated from more prosperous to poorer areas. Moreover, the central government surely played some role in directing foreign investors and foreign lending institutions to many different sections of China to ensure that the reform and open door policies produced benefits for important constituencies.

However, I do not wish to leave the impression that the central government played the key role in preventing the growth of provincial economic differentials. Rather, to the extent that any one single factor may have been responsible for leveling provincial disparities, is best summed up as the return of more natural economic patterns that offset the extremely irrational and self-defeating patterns that characterized China's regional economic policies in the previous two decades.

The work of several observers but most notably Nicholas Lardy and Barry Naughton, have demonstrated the incredible wastefulness and counterproductivity of much of Maoist economic policy during the 1960s and early 1970s.[18] Lardy has shown that the attempt to reach local self reliance forced many poor agricultural areas to abandon crops that they produced efficiently for the market. The policies of near autarky appear to have worked particularly harshly against the poorest areas—perhaps because their only alternative was to retreat to subsistence agriculture. Naughton has reached a similar conclusion about the immense waste of resources involved in the "Third Front" effort to bring industry to the poorest areas. The campaign was usually unsuccessful at its primary objective—building industrial show cases in the rural areas—and it probably also diverted those areas from doing what they could do best.

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[17] These calculations do not include the World Bank's loans to educational institutions and to financial intermediaries. These projects have a myriad of sub-components and tend to have the largest number of beneficiaries. In fact, in several of the educational programs, virtually every province in China was represented by its leading university or research institute. Thus, excluding these projects from the analysis probably leads to an underestimate of the geographical spread of the World Bank program.

[18] Nicholas Lardy, *Agriculture in China's Modern Economic Development*, Cambridge University Press, 1983. Lardy concluded that "to a signficant degree rural poverty in the late 1970s was policy-induced and not merely the consequence of resource endowments or other natural constraints". (p. 176). Barry Naughton, "The Third Front: Defence Industrialization in the Chinese Interior", *China Quarterly*, No. 115, September 1988, pp. 351–386.

Largely as a result of these misguided Maoist policies, China's economic map in 1977 revealed a most unusual regional economic development pattern. Guangdong's per capita NMP ranked only slightly above average and Fujian was among the poorest provinces in China. Other apparent anamolies include the fact that Sichuan, China's most productive grain-growing province, ranked second from the bottom in per capita NMP. Shandong and Zhejiang (generally considered relatively advanced because of their long coasts with good ports and other natural conditions) ranked 14th and 16th respectively. On the other hand, Qinghai, Ningxia and Gansu—normally thought of as among the poorest areas of China ranked above all of the provinces just mentioned with the exception of Guangdong.

This pattern of development largely reflected the Chinese Communist Party's pre-occupation with real and imaginary ("sugar coated" in the parlance of the Cultural Revolution) bullets that party stalwarts worried might undermine China's military and idealogical positions. These concerns not only prevented the economic success of Hong Kong from spilling over into neighboring Guangdong province, they also made China's planners unwilling to invest in Fujian (because of fear of possible war in the Taiwan straits) and reduced the possibility of direct contacts between rapidly growing Japan and coastal provinces such as Shandong. Moreover, as argued in the section on foreign trade, China's foreign trade planning systems made it difficult for provinces neighboring the major metropolitan areas to take advantage of their own resources to participate in foreign trade.[19]

While the readjustment of the previous irrational situation often went too far during the decade of reform, the return to a more normal economic pattern is probably the single most important fact that explains why Zhejiang, Jiangsu, Anhui, Shandong, and Henan and Guangdong and Fujian improved their positions so dramatically. They were enjoying the natural spread effects that spilled over from nearby major metropolitan regions and benefitting from the reversal of the previous period's constraints on the exploitation of their own locational advantages and natural resources.

"Economic spread effects", cannot, however, account for every aspect of China's regional economic development pattern during this period. For example, certain provinces such as Xinjiang and

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[19] One of the enduring ironies of the Maoist era is the fact that despite the best intentions to develop a system to promote a more egalitarian economic development pattern, economic differentials (as measured by provincial per capita net material product) actually increased between 1957 and 1977. Taking the standard deviation over the mean (per capita NMP) as the measure of variation in economic performance there was a 50% rise in the variation of provincial per capita NMP between 1957 and 1977 (.83 in 1957 and 1.24 in 1977).

Yunnan, were too far away from metropolitan areas to expect to benefit from the "spread effects", and yet they grew substantially more rapidly than the national average.

To take another example, Hebei, which surrounds Beijing and Tianjin, grew less rapidly than the national average during the decade (although growth did pick up in the second half of the period—see Footnote 5). If 'spread effects' are the key reason for variations in regional growth one must explain why Hebei did not appear to benefit.

It is always possible that Hebei did ,in fact, benefit from the spread effects so noticeable around Shanghai and Hong Kong. Conceivably other unexplained factors may have offset the spread effects. Suffice it to say that such an anomaly presents an obvious target for more detailed research.

V. CONCLUSION

By most standards all Chinese provinces grew very rapidly during the decade of reform, but the pattern of provincial development tends to contradict the conventional wisdom. The rich did not grow richer (relatively) nor did the poor grow poorer—if anything the opposite happened. And while coastal areas generally had an advantage, some of the most successful performances came from provinces that were far inland.

The results are too diverse to be explained by any single economic or political theory. But one overall perspective that explains a substantial part of the data is that the regional economic pattern during the decade of reform was primarily a reaction to fundamental economic opportunities open to the various provinces. The most rapidly growing provinces took advantage of their nearby location to the relatively developed areas of Hong Kong and Shanghai. These provinces had a comparative abundance of resources, open lands and relatively underutilized utilities. The reforms freed them to use their resources to their own advantage—and often to the disadvantage of more developed areas such as Shanghai and Tianjin.

It is also important to add that the experience of the "decade of reform" may not be repeated in the 1990's. This is partly due to uncertainties about how much of the reform program will be retained in the Post-Tiananmen period. In addition, however, there are other reasons to warn against any simplistic extrapolation of the trends of the 1980's into the 1990's. This is partly due to the fact that the rapid growth of Guangdong, Fujian, Jiangsu, Zhejiang and other provinces had a leveling effect in the 1980's (vis a vis the richest provinces). But continued relatively rapid growth of the same provinces for an extended period of time will obviously bring about the phenomenon of the "rich getting richer". In addition, as discussed above, the new revenue "contract responsibility system" and trends in regional allocation of fixed asset investment could lead to greater variations in provincial economic performance in the coming decade.

Finally, it should be noted that analysis of provincial per capita net material product differences is only one measure of the effect of China's reform policies on the distribution of economic benefits. Provinces are large nation-state type entities and the regional differences within provinces may be as large as those between provinces. And, most importantly, assessing regional differences does not shed any light on whether there has been a significant widening of differences among classes of people within the same region.

Despite these qualifications, provinces are relatively integrated political and cultural entities. Their populations think of themselves as Cantonese, Fukienese and Sichuanese and intense rivalries separate the provinces. Such inter-provincial tensions underline the importance of the conclusion that the "decade of reform" did not worsen the economic differences among the provinces.

APPENDIX

DATA SOURCES FOR FIGURES 1–7

Per Capita NMP. Provincial and national per capita NMP for 1988 are found in *Zhongguo Tongji Zhaiyao:1990 (Hereafter, TJZY)*, (A Statistical Survey of China: 1990), China State Statistical Bureau Publishing Company, Beijing, 1990, p. 6. Similar statistics for most provinces for 1983 and 1978 are given in *Guomin Shouru Tongji Ziliao Huibian: 1949–1985 (Hereafter GMSRTJZL)*, China State Statistical Bureau publishing Company, Beijing, 1987, pp. 97–421. In a very few cases, it was necessary to use Provincial Yearbooks (Various Editions) and *Zhongguo Jingji Nianjian (Annual Issues-Hereafter, JJNJ)* (Chinese Economic Almanac), Economic Management Publishing Company to fill in holes where data was not available.

Growth of NMP. For 1978-1985, *GMSHRTJZL* gives annual growth rates in comparable prices for most provinces. A few holes in the data were filled by using *JJNJ (Various Years)* and provincial yearbooks. For 1986 and 1987 growth of Provincial NMP in comparable prices is presented in in *Zhongguo Tongji Nianjian (Annual Issues—Hereafter TJNJ),*China State Statistical Publishing Company, Beijing. The 1988 growth rates of provincial NMP are given in *JJNJ, 1989* (Section VI). The few missing estimates were found in provincial yearbooks.

Provincial and Local Budget Revenues and Expenditures. *TJZY:1990* provides statistics on central government and local government (all governments combined) budget revenues for 1979 through 1988. The same estimates (for a shorter time period) for revenues and additional estimates of budgetary expenditures are available in *TJNJ (Various Issues).* These estimates were compared to the sum of all provinces reported budgetary revenues and expenditures that can be obtained from provincial yearbooks and from *JJNJ (Various Issues).* For the same years, the two series are very close. Therefore, for the years when data was not available from *TJZY or TJNJ* the sum of all provincial budgetary expenditures and revenues were used.

Foreign Investment Enterprises by Provinces. Data was obtained from the Ministry of Foreign Economic Relations and Trade Annual Publication *Foreign Trade Almanac.* A Fuller description of this and other data on foreign investment in China can be found in US-China Business Council, *US Investment in China: A Special Report,* Washington, D.C., 1990.

World Bank Loans By Province. The Basic data is found in the World Bank's Appraisal Reports for each project. The reports generally do not give exact figures for how much money will be used in each province. However, for the major components they do identify the provinces that will benefit from the project. The assumption was made that the total loan proceeds for a given major component were divided equally among the benefitting provinces.

A SYSTEMIC ANALYSIS OF PROSPECTS FOR CHINA'S ECONOMY

By Jan Prybyla *

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SUMMARY

The fundamental problem of the Chinese economy is deficient economic performance, which resolves itself into chronic waste, technological retardation, and faulty incentives to labor and management. The suggested contributory causes are some aspects of tradition, "acts of god" (natural population increase, land problems), errors of policy, and—the determining one—the economic system. System-generated problems have to be addressed by systemic reform, that is, change of system, but not by intrasystemic adjustments. This requires the replacement of the institutions and theories of the system responsible for the problems by a minimum critical mass of internally logical, interacting, compatible, integrated institutions and ideas of another system, not by random transplants. If the transition is from central planning to a market system it must satisfy seven operational conditions of a successful market system: free markets, free prices, workable competition, dominant private property rights, macroeconomic instruments of government intervention in the market, rule of law, and dissolu-

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tion of the planning system's *nomenklatura*. In China, where by the late 1970s the fundamental problems of the economy were attributed to the system of central planning, all seven conditions of transition to a market system were violated. Two of them—free prices and private property—are examined. The result was the emergence of a mongrel, half-way nonsystem which did not solve or alleviate the chronic problems, but brought out from hiding some nagging shorter-range troubles (e.g., inflation, unemployment). After September 1989 these shorter-range problems were increasingly combated with old fashioned administrative command weapons. After June 4, 1989 the very idea of marketization and privatization of the system was exorcized on ideological grounds. The current (1990) nonsystemic situation is not viable in the long run. If left structurally uncorrected, it will lead to a collapse of the economy within a few years. Return to (an updated) central administrative command system, presently being implemented, will disguise the short-term problems but not address the fundamental structural problems of waste, technological retardation, and faulty incentives. It will simply postpone the economy's implosion by perhaps as much as ten years. Economic logic dictates that the way out of China's systemic problem of chronic qualitative underperformance is to move all the way to the market system. The logic will probably impose itself before the end of the 1990s, but the exact timing will depend on the pace, sequence, and nature of leadership attrition and change.

I. INTRODUCTION

The predictions made in this essay about the qualitative performance of the Chinese economy in the 1990s are based on my understanding of the trends in China's economic system since 1980. It was during this period that the post-Mao economic changes got in stride under the slogan of the Four Modernizations, of which the ideological-political boundaries were concurrently defined by the Four Cardinal Principles. In other words, the forecasts emerge from my understanding of systemic principles.

As a matter of common-sense prudence, one should point out that the capacity of economics to make reliable predictions is limited by two rather awesome considerations. First, "no scientific law, in the natural scientific sense, has been established in economics, on which economists can base predictions." Second, although the tendency statements (principles) of economics, like those of the natural sciences, presuppose a ceteris paribus clause, in the natural sciences the lesser "disturbing causes" have their own laws specifiable in quantitative terms, whereas the ceteris paribus clauses in economics are either unspecified or specified only in qualitative terms.[1] In its mathematizing drive to become more like the "hard" sciences, economics has tried to put away its moral philosophy origins with all the other things being held equal. However, morality will not conform to the requirements of being equal or fit neatly into its assigned niche of lesser disturbing causes. Yesterday's

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[1] Stefano Zamagni, "Economic Laws," in John Eatwell, Murray Milgate, Peter Newman (eds.), *The New Palgrave: The Invisible Hand* (New York: W. W. Norton, 1987), pp. 103–104.

"pragmatic" and "liberal" reformers, like Deng Xiaoping, suddenly at three in the morning kill their grandchildren in Tiananmen Square. John Stuart Mill has it right: "It really is of importance not only what men do, but also what manner of men they are that do it." [2]

The following Sections II–IV lay the foundations for the predictions made in Sections V and VI.

II. PROBLEMS

China together with other centrally planned ("Soviet-type") command economies suffers from a chronic deficiency of qualitative performance or inefficiency. This fundamental problem resolves itself into three debilitating, interrelated components that in the past failed to respond to remedial measures of intrasystemic adjustment, such as reorganizations, personnel reassignments, administrative price corrections, and reeducation of those practicing an erroneous work style. The three components of the quality problem are waste, technological retardation, and faulty incentives.

A. WASTE

This resolves itself into chronic shortages of useful goods side by side with chronic surpluses of useless goods, both subsidized by the state budget. Goods are useful when they are wanted and can be used. They are useless when they are not wanted and cannot be used—as when they do not work because of inferior quality or no quality at all (a very common problem in the system), or when they are of the wrong assortment, or are located in the wrong place (e.g., in the north when they are needed in the south and there is no way to get them from north to south), or when they are produced and distributed at the wrong time, or produced at the right time but not distributed, or distributed to the wrong customers, or are damaged or lost in transit, or necessitate scandalously profligate rates of materials and energy utilization, and so on. The waste is not restricted to products. It includes production factors. It has been estimated that at the end of the 1970s one-third to one-half of the rural manpower in China (100 to 150 million people) was unnecessarily employed in agricultural work and could have been used more productively elsewhere.[3]

B. TECHNOLOGICAL RETARDATION

The economy, certainly its civilian segment (but judging by the 1979 expedition against Vietnam, the military as well), has troublesome problems with research, development, innovation, and diffusion of modern technology of both the engineering and social (business know-how) varieties. This has had deleterious effects on the quality of growth. Growth has been based primarily on the addition of production factors (especially labor and capital) of known technological content, rather than on factor productivity improvements. Technological sluggishness inhibits China's efforts to work its way out of poverty and to compete on the world market with rising numbers of technologically dynamic newly industrializing market economies.

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[2] John Stuart Mill, "Essay on Liberty," Chapter 3, in Marshall Cohen (ed.), *The Philosophy of John Stuart Mill* (New York: The Modern Library, 1961).

[3] Claude Aubert, "Rural Capitalism versus Socialist Economics? Rural-Urban Relationships and Agricultural Reforms in China," Communication for the 8th International Conference on Soviet and East European Agriculture, University of California, Berkeley, August 7–10, 1987, pp. 11–12.

C. FAULTY INCENTIVES

The way incentives to labor and management are set up contributes to waste and low factor productivity. Merit plays little role. It pays to be inefficient in the system, one of the typical procedures of which has been to use the profits of relatively successful firms to infuse with life the failing ones—the equivalent of $14 billion in 1990, nearly $23 billion (one-third of the planned 1990 budget) if all bailouts are counted.[4] It is not stretching the point to conclude that the system turns out waste as one of its leading products by actively encouraging inefficient worker and managerial behavior.

III. ETIOLOGY

After the death of Mao and until June 3-4, 1989, a great debate took place in China on the causes of deficient qualitative performance and on how to address the combined waste-technology-incentive problem. By 1980 the earlier scapegoat analysis that ascribed every imaginable economic and other disturbance to the Gang of Four had run its course, and with occasional time out to chase ideological ghosts and monsters (bourgeois liberalization), the substance and tenor of the debate became increasingly technical and rational—"pragmatic," was the preferred Western term for it.

Contributing to the quality of economic performance, or the lack of it, are four interrelated and interacting elements. They are: tradition, "acts of god," policy, and system. I suggest that while all are important, the last is determining.

A. TRADITION

Four contributory factors are often brought up in discussion. First, is the Confucian legacy, which is said to have contributed both positively and negatively to the economic performance of various contemporary Chinese communities. The reviewer of Spence's *The Search for Modern China* ascribes to this legacy Deng Xiaoping's distaste for popular participation in politics and his conviction that dissent is synonymous with disloyalty, as well as Liu Binyan's speaking out, despite continuous persecution, against corruption and the abuse of power.[5] Second, there is the spirit of the science and democracy movement going back to the early decades of this century, spreading out from Beida and embracing the ideals and some ideas of Sun Yat-sen. Third, in conversations with Chinese intellectuals, young and old, during my teaching stay in China, what kept coming up was the enormous dead weight of "feudal" peasant ways, glacial in their pace of change, a mind-boggling impediment to modernization, my interlocutors thought, worse even than the socialist system. Fourth, there is the shaping of attitudes by communism, relatively brief, but massively and relentlessly pursued. This includes the inculcation of phobias about private property, profit-making, and individual initiative, historical materialist redefinition of class distinctions, the fanning of class antagonisms, and the raising to historically new heights of bureaucratic elitism, arrogance, nepotism, corruption, and envy.

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[4] In the absence of rational prices that would indicate the opportunity costs in the system, it is difficult to determine which firms are successful and which are not. The 1990 projected figures are from Adi Ignatius, "Top Official Rules Out Market-Oriented Reforms," *The Asian Wall Street Journal Weekly*, March 26, 1990, p. 3. In 1989 the Chinese government loaned money to unprofitable state enterprises through its banks in order to meet its enterprises' previously negotiated profit-and-tax quota obligations to itself. In this way the government protected its revenues at the risk of rekindling inflation in the economy. Baroque? Robert Delfs, "Creative Accounting," *Far Eastern Economic Review*, April 5, 1990, pp. 38-39.

[5] Vera Schwarcz, review of Jonathan D. Spence, *The Search for Modern China*, (New York: W. W. Norton, 1990), in *The New York Times Book Review*, May 13, 1990, pp. 1, 32-33.

B. ACTS OF GOD

These are "objective" causes that can have positive or negative effects on the quality of economic performance. In the specific instance of China, two such acts deserve mention: the huge absolute size and rapid incremental increase of the population, and land problems—shrinkage of farmland from an already exiguous base and acute energy shortages. Less than 10 percent of China's land area is suitable for farming. "An average of 200,000–300,000 hectares of the country's cultivated land is lost each year, a loss accompanied by a reduction in irrigated areas, weakened flood control facilities, and lower capacity to drain farmland. . . . Many places suffer soil erosion and a deteriorated ecological balance." [6] Surveying China's landscape, V. Smil notes that of the millions of trees planted during repeated mass campaigns over the last three decades, only one-third have survived; biomass consumption by peasants is ravaging the countryside while "about half a billion people lack enough fuel just to cook three meals a day for three to six months a year.[7]

A combination of better policies and better system could, one should think, counteract some of the ungodly impacts of these acts or at least limit the damage. Such a combination has eluded China so far.[8]

C. POLICY

Policy errors are the standard communist explanation, in China and elsewhere, for much that goes awry in the system, the perennial low quality of economic performance included. There is some substance to this diagnosis, but it fails to account for the fullness and persistence of static and dynamic inefficiencies. If taken seriously by those who offer it, it can result in intrasystemic policy adjustments that do little to improve the situation, and often make things worse. In China, two monumental policy errors have been the Great Leap Forward—a Maoist variation on the theme of socialist administrative command—and the Third Line (*san xian*) industrial policy pursued for almost two decades beginning in the late 1960s. The *san xian* had as its objective providing China's interior provinces with their own industrial, especially heavy industrial (defense-related), infrastructure through generous infusions of capital and massive assignments of labor. Between 1966 and 1976, out of a total state investment in capital construction of 274 billion yuan, 117 billion yuan went for Third Line projects equipped with "iron pot" incentive systems and 1950s technologies.[9] One result has been that China's industrial structure is probably more distorted than that of other socialist economies that in the past had followed Stalinist sectoral and regional priorities. It is like cleaning up after the dinosaurs.

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[6] Tian Jiyun (Vice Premier of the State Council), "China's Current Agricultural Situation and Policy," *Beijing Review*, January 8–14, 1990, p. 19.

[7] "Vaclav Smil, *Energy in China's Modernization: Advances and Limitations*, (Armonk, N.Y. and London: M. E. Sharpe, 1988).

[8] On population policy: John Aird, *Slaughter of the Innocents*, (Washington, D.C.: American Enterprise Institute, 1990). In the year 2000 there will be in China 340 million women of child-bearing age, up 35 million from 1989. *The Asian Wall Street Journal Weekly*, April 23, 1990, p. 25.

D. SYSTEM

The implicit assumption behind the policy errors explanation is that the system within which policies are formulated and applied is basically sound and that, therefore, there is no need to dig up the foundations and replace the structure. Although not denying that policy errors are a cause of quality problems, the system-at-fault argument holds that the fundamental cause is structural; that bad policies come not just from fallible or crooked men but from flawed theories and institutions. The policy errors explanation was dominant in China from 1976 through 1978. After that, and until September 1988, the system-at-fault diagnosis gained ground. But effective remedies do not inevitably follow from correct diagnosis. As a rule, accurate diagnosis of the problems of socialist command planning had been followed in the past by the application of partial, unintegrated, insufficient, incomplete, or quack remedies. China, which at one time looked as if it might become an exception to this rule, now exemplifies the rule.

The reason for the failure of central planning is that it is based on an erroneous intellectual premise about the availability and coordination of knowledge in an extended social order known as the economy. The "fatal conceit," as Hayek calls it, is to presume that system-wide planning can be done at all, that it is possible to deliberately construct a rational complex structure, dispensing with the "natural, spontaneous, and self-ordering process of adaptation to a greater number of particular facts than any one mind can perceive or even conceive." [10]

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[9] Richard Kirby and Terry Cannon, "Introduction," in David S. G. Goodman (ed.), *China's Regional Development*, (London & New York: Routledge, 1989), p. 9; Barry Naughton, "The Third Front: Defense Industrialization in the Chinese Interior," *The China Quarterly*, No. 115, September 1988, pp. 351-376.

[10] F. A. Hayek, *The Fatal Conceit: The Errors of Socialism*, (Chicago: University of Chicago Press, 1988), p. 73. "What Hayek showed was that much modern economics misconstrues the nature of the economic problem facing society by assuming away the problems raised by the fact of dispersed information. To imagine (as earlier critics of Mises and Hayek had proposed) that it would be possible to run a socialist system by simulating the market and promulgating nonmarket 'prices' for the guidance of socialist managers is to ignore the extent to which market prices—both of consumer goods and of the capital goods that constitute the economy's capital structure—*already* express the outcome of an entrepreneurial discovery procedure that draws upon scattered existing knowledge." Roger W. Garrison and Israel M. Kirzner, "Friedrich August von Hayek," in John Eatwell et al., *The Invisible Hand*, p. 124.

IV. Dealing with Systemic Deficiencies

A. SOME CONCEPTUAL ISSUES

Like other social organisms, an economic system is an internally logical whole of interdependent, interacting, compatible, integrated institutions and ideas, a holistic operation, not a random collection of parts. Economic institutions are socially agreed-on and legally recognized and protected ways of allocating relatively scarce resources among competing alternative uses. The four major functions of economic institutions are discovery, transmission, and processing of information about costs and utilities (supply and demand) in the system; coordination of that information at a point in time and intertemporally; motivation of economic agents (consumers, workers, managers, investors, entrepreneurs); and the designation of socially enforced rights to select uses of economic goods (property). The ideas of an economic system consist of positive theories (economic analysis) and normative rules (economic ethics). The requirement of internal logic, interdependence, interaction, compatibility, and integration applies not only to the system's institutions, but to positive and normative theories, and to the relationship between the institutional framework and its explanatory and justifying ideas. An economic system functions within a broader context of political, legal, cultural, and other systems with which it, too, must interact in compatible, synchronized ways.[11]

When the problem of chronic inefficiency is diagnosed as originating in the system's ideas and its institutions of information, coordination, motivation, and property, and if that inefficiency is seen as keeping people permanently trapped in poverty and making the economy increasingly backward relatively to others, the system has to be removed and replaced by a different system.[12] The term "reform" should be reserved exclusively to describe such systemic transubstantiation.[13] Intrasystemic adjustments will not do, and neither will half-measures sometimes referred to as the "third way." Economic reform must be accompanied by symbiotic reforms of the environmental ecosystems of law, politics, and culture. The Soviet Union's unwillingness and perhaps inability over nearly 40 years to carry out economic and environmental reforms has mired the country in its present frightful condition that threatens to tear it apart.

Systemic reform does not mean the replacement of an operational system (however poorly it operates) by an ideal, pure model of another system; say, inefficient central administrative command planning by a perfectly competitive, allocatively optimal and dynamic market system. What is indispensable, however, is that a certain minimum critical mass of internally logical, interdependent, interacting, compatible, and integrated institutions and ideas be introduced to constitute a working whole (a functioning system); and that each component institution and idea contain within itself a similarly critical minimum mass of internally logical, interdependent, interacting, and integrated elements.

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[11] Jan S. Prybyla, *Reform in China and Other Socialist Economies*, (Washington, D.C.: American Enterprise Institute, 1990), Chapter 18.

[12] *Idem., Market and Plan under Socialism: The Bird in the Cage*, (Stanford: Hoover Institution Press, 1987).

[13] *Idem.*, "The Chinese Economy: Adjustment of the System or Systemic Reform?" *Asian Survey*, Vol. 25, No. 5, May 1985, pp. 553-586.

For example, the freeing of prices must be accompanied by privatization of property rights; the abolition of monopolies; the removal of impediments to market entry and exit; the retirement of ethical rules concerning equality of outcomes, guaranteed lifelong employment, and immortality of the firm; and the establishment of the rule of law. Private property rights cannot be truncated, limited, say, to the right of use, without right of transfer or with transfer rights administratively circumscribed by socialist ethical codes concerning the inherently exploitative nature of private property exchanges.

Not all resources in the system have to be or, indeed, can be controlled by private property rights, but where they are, the rights must be comprehensive. Thus, "The owner must have *all* the rights anyone can have over the things in question. The suggestion sometimes encountered in textbooks that ownership can be reduced to a 'right to an income' is inadequate, because it mistakes one element in ownership for the whole... The crucial element in the *ius utendi et abutendi* is the ultimate power of disposal. It is, therefore, not only a question of having all the rights the law allows, but of the law conferring on some person or institution the right of disposal."[14]

While understandable politically, slowness and postponement are not advisable in matters of economic system reform for reasons that have to do with the need to simultaneously introduce a critical minimum mass of structural changes within the economic system and around it. The experience of Eastern Europe, the Soviet Union, and lately China suggests that delay is synonymous with nonreform. Policy steps (e.g., to deflate the monetary demand overhang in a system where money is practically inconvertible into goods) can be taken to reduce the pain of dislocation to politically manageable proportions, but by definition systemic reform *is* dislocation and involves pain. Shock therapy is the only way if one is serious about systemic transformation. An essential precondition is that the people trust their government so they will willingly, if not enthusiastically, put up with the pain of systemic transition. This certainly is not true of the Soviet Union, China, and Romania, among others. The point has been reached where retirement of individual leaders will not restore popular confidence and trust. Only the removal of the Communist party can conceivably do it.

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[14] Alan Ryan, "Property," in John Eatwell, et al., *The Invisible Hand*, p. 228. In the same volume, Armen Alchian ("Property Rights," p. 233) establishes the inter- and intrainstitutional connections referred to above and their effect on the quality of economic performance: "For the decentralized [market] coordination of productive specialization to work well, according to the well-known principles of comparative advantage, in a society with diffused knowledge, people must have secure, alienable private property rights in productive resources and products tradeable at mutually agreeable prices at low costs of negotiating reliable contractual transactions. That system's ability to coordinate diffused information results in increased availability of more highly valued goods as well as of those becoming less costly to produce. The amount of rights to goods one is willing to trade, and in which private property rights are held, is the measure of value; and that is not equivalent to an equal quantity of goods not held as private property (for example, government property)."

B. MARKET REFORM

When it is determined that the system of central administrative command planning is the primary cause of an economy's inefficiency and that such deficient qualitative performance can no longer be tolerated, the only effective cure is to carry out economic (as distinct from administrative) decentralization, that is, reform the system of the plan into a market system.

Marketization of the plan requires that the following be introduced (almost) simultaneously:

1. Free markets for goods and factors, implying free entry and exit for buyers and sellers, no physical rationing of inputs and outputs, and absence of exogenous compulsion on economic agents to enter into transactions.
2. Free prices for goods and factors. Prices must reflect relative scarcities in the system, i.e., changing relative costs and utilities (opportunity costs). Prices must be the core decision-making device for information, coordination, and incentives, and there must be a tendency toward a single market price for each commodity and service.
3. Workable competition, both domestic and foreign, between and among buyers and sellers, that is, the availability of alternative courses of action. With some strictly circumscribed ("natural") exceptions, monopolies and monopsonies—public and private, central and local—must be removed.
4. Dominant private property rights. These rights, vested in individuals and freely formed associations of individuals, must be comprehensive and cover transfer, use, and income. They must be legally protected and introduced with decent haste on a grand scale.
5. Macroeconomic monetary and fiscal instrumentalities of government intervention in the market process to remedy market breakdowns and failures, and accommodate evolving ethical views on what constitutes social responsibilities within the system. This necessitates the creation of an independent banking system, reform of the tax system, and establishment of national unemployment insurance and pensions systems.
6. Rule of law, that is, a legal order (not just laws) that applies equally to all without exception, government included. "The desirability of the order that emerges as the unintended consequence of human action depends ultimately on the kind of rules and institutions within which human beings act, and the real alternatives they face." [15]
7. Measures to dismantle the vast web of party bureaucratic patronage, the *nomenklatura*, at all levels of society. The system must be promptly and thoroughly detoxified by ditching the apparatchiks.

In the realm of ideas, economic theory based on Marxist categories has to be replaced by market analysis, and the socialist ethical code by market ethic as modified by 5 above. Such modification can go quite far without destroying the essential operational principles of the market system. This was demonstrated by the West German *Soziale Marktwirtschaft*, Sweden's welfare ("soft") capitalism, and the high degree of government involvement, both formal and informal, in the capitalisms of Japan, Taiwan, Singapore, and South Korea. The market system is flexible and adaptable. It has the "capacity to adapt to different cultural contexts and indeed to survive sometimes remarkable cultural decadence.... This autonomous functioning is precisely one great advantage of capitalism over its rival systems: it is at least relatively 'foolproof,' because the market corrects the actions of fools much more reliably than any planning mechanism." [16] But the market system's flexibility and adaptability have their limits. There is a point beyond which systemic transplants reduce market institutions and ideas below the critical minimum required for the proper functioning of the system. Janos Kornai argues correctly that "the real issue is the relative strength of the components of the mixture." Although there exist no precise measures, "the frequency and intensity of bureaucratic intervention into market processes have certain critical values. Once these critical values are exceeded, the market becomes emasculated and dominated by bureaucratic regulation." [17] China's problem after Mao has been that the critical market minimum was never reached.

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[15] Karen E. Vaughn, "Invisible Hand," in John Eatwell et al., *The Invisible hand*, p. 171.

C. DEALING WITH SYSTEMIC DEFICIENCIES IN CHINA

The great debate about China's unsatisfactory quality of economic performance produced a consensus among a large majority of economists and many influential officials (although the last were circumspect about it in public) that the villain of the piece was the system of central administrative command planning, that the system had to be changed, and that the change had to be in a market direction (ideologically rightward). Arriving at the consensus was facilitated by bad memories, still fresh, of Mao's attempt to push the system to the left during the Great Leap Forward and the Cultural Revolution. At no time was it said that the socialist economic system would have to be replaced by the market system (capitalism). In China, as in Eastern Europe before November 1989, such a conclusion had been reached by most thoughtful people but could not be openly articulated, although some reform economists came close to it. The exclusion from public discussion of the sensible idea that capitalism is the only viable replacement for socialism—if, that is, socialism's waste-technology-incentive problem is to be addressed effectively—left an intellectual void into which all manner of "third way" pseudo-solutions soon poured in, including the cloudy concept of "socialism with Chinese characteristics."

Although until September 1988 some rather bold structural reforms were carried out (e.g., the dissolution of rural producer collectives), they were incomplete, unfinished, and unintegrated. Put simply, they did not add up to the minimum institutional and theoretical requirements of a market system. The changes made in the early to mid-1980s violated every one of the seven basic conditions for the establishment of a successful market system. Only two of the violations can be discussed here: free prices and private property.[18]

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[16] Peter L. Berger, "The Market, Morals, and Manners," *The Wall Street Journal*, July 14, 1988, p. 22; *idem.*, *The Capitalist Revolution: Fifty Propositions about Prosperity, Equality, and Liberty*, (New York: Basic Books, 1988); Nathan Rosenberg and L. E. Birdzell, *How the West Grew Rich*, (New York: Basic Books, 1986).

[17] Janos Kornai, "The Hungarian Reform Process: Visions, Hopes, and Reality," in Victor Nee and David Stark (eds.), *Remaking the Economic Institutions of Socialism: China and Eastern Europe*, (Stanford: Stanford University Press, 1989), p. 48.

1. *Prices.* Some prices, mainly of selected nonstaple farm products, were freed, but most were not—including most factor prices. A multitrack, quite irrational price arrangement emerged in which some prices (including prices of identical goods) were free; others were quasi-free; some were floating, some "negotiated"; others were fixed by the state. There is one set of input prices for domestic firms and another set for foreign joint ventures; one official exchange rate for the renminbi, another for foreign exchange certificates, and another on the black market. Claude Aubert attributes the post-1984 grain production crisis (which threatens the decollectivization reforms) primarily to price distortions flowing from the multitrack price arrangement, accompanied by severe restrictions on the freedom of rural markets and the absolute power of the corrupt state to organize grain marketing and to control essential inputs such as urea, bicarbonate of ammonia, and fuel oil. Although it had been announced in 1985 that above-contract sales to the state marketing network were to be made at free market prices, in fact such sales were made at "negotiated" (i.e., informally state-fixed) prices, which were roughly midway between the contracted and the market price. "Quite often these sales made at 'negotiated prices' were even described as a 'second levy' imposed on the peasants after the 'first levy,' i.e., the contract sales (which were 'contract' only in name)." [19]

By fall 1988 the decision was made to postpone price liberalization for several years. After June 4, 1989, the idea of price freeing was no longer a technical subject to be discussed on the merits of the case. It became part of resurgent socialist economic liturgy and was classified as one of the key Western subversive efforts to bring about China's "peaceful evolution" from socialism to capitalism. In a speech to the National People's Congress (March 20, 1990), premier Li Peng announced that the government would tighten control over market prices in rural and urban areas. Some prices would be readjusted up, some down by the government, but not by market forces. Allocative irrationality (waste) still goes on. It is probably worse now than before.

2. *Property.* As noted, private property rights must be comprehensive and should be introduced quickly on a sufficiently large scale for them to dominate the system. There is bound to be conflict between the need for speed/efficiency and fairness since privatization involves very significant changes in the social structure

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[18] The violation of the other conditions is discussed in Prybyla, *Reform in China and Other Socialist Economies*, Chapters 11 and 13.

[19] Claude Aubert, "The Agricultural Crisis in China at the End of the 1980s," Paper presented at the European Conference on Agriculture and Rural Development in China, Sanbjerg, Denmark, November 18–20, 1989, pp. 5–10. In 1985 fertilizer cost 630 yuan per ton at the state price, and 930 yuan per ton at the floating price. By 1988 the state price had risen to 800 yuan per ton, while the floating price to 1,437 yuan per ton. Roseanne E. Freese, "The Mixed Blessings of Agricultural Reform," *The China Business Review*, November–December 1988 p. 32. If a farmer wants to get fertilizer from the state at a lower price, he must conform to state directions on what to grow and sell to the state at state-set prices (e.g., grain, the state purchase price of which in May 1989 was barely one-third of the market price and was paid for mostly with IOUs). In any event, he has to bribe the officials. *China Daily*, May 20, 1989, p. 3.

and large redistributions of wealth, and poses difficult questions of how to privatize property in a system lacking rational prices, independent banking, proper accounting, and markets for land and capital (including securities markets), and in which self-recycled members of the privileged party-affiliated class are in the best financial position to buy up state industrial and commercial assets, thus resurrecting the *nomenklautra* in phony privatized form. China's post-Mao privatization effort has failed under each of these headings.

Attention is here focused on agriculture where privatization had been carried the farthest. There has been some privatization of consumer services, but very little in industry where state ownership has remained unchallenged at all times, although state control was administratively decentralized. At no time did private property rights dominate the system. In agriculture the property rights granted to peasant families were restricted to residual rights of use and income. Transfer rights were always extremely narrow. Under the household production responsibility system (*baogan daohu*) what was privatized was the surplus remaining after contractual deliveries to the state and, insofar as the authorities did not interfere with prices on rural markets, to the income derived from sales of the surplus on these markets. At no time were deeds to land granted to the families, and transfer rights were severely restricted and regulated by local governmental authorities. The size of land allotments was determined by the authorities according to the cadres' ideas on distributional fairness (as modified by bribes), and, officially at least, there were restrictions on the hiring of labor and on migration. Essential inputs (chemical fertilizers, machinery, farm plastics) could be obtained only from the state monopolist. The state was the main buyer of farm output at imposed prices. Delivery contracts were not negotiated laterally, as between rough equals, and there was never any question of rule of law or even of half decent and efficient legal framework. "Village cadres reign supreme and the balance of power between the rulers and the ruled has not been altered greatly by decollectivization." [20] In any event, the essential free market-private property ingredient of voluntariness was always missing: no delivery contract (which now includes birth quota obligations), no land.

The inflationary and unemployment surge that began in 1985 led the leadership in 1988 to finally declare that price system liberalization would be postponed. At the time this was viewed as a technical-tactical decision, and was accompanied by a push on the part of some economists (e.g., Li Yining of Beijing University) for more privatization of industry through various stockholding schemes, and the inclusion of the right of transfer in private property rights to agricultural land. After June 4, 1989, all discussion of privatization was relegated to socialist economic demonology. Accused of profiteering, exploitation, bribery, and tax evasion, private business (foreign joint ventures excluded) was increasingly harassed and restricted and, more ominously, put outside the pale of officially proclaimed social morality. The state now defines what is "reasonable" private profit and takes the rest. By law, private firms have to pay 52 percent of their profits in taxes and put back 30 percent into the business. The remaining 18 percent is subject to various local levies including a tax on "unreasonable" earnings.[21] State banks have been instructed to refrain from lending to private businesses partly to combat inflation, but mostly out of socialist ethics. For reasons of economies of scale, decollectivization is criticized as having produced excessive parceling of land (more than 200 million farms, each of which is about two-thirds of a hectare on average). Land nationalization is being advocated by some establishment economists. The existing system of land tenure is being eroded through reduction in the duration of land leases from the theoretical 15 years to 5 years, 3 years, or even 1 year; increases in extractions from peasants (up to 750 yuan per hectare, or about half the total net revenue of two annual harvests); pressure put on part-time worker-peasants to relinquish their plots and on farm families in general to form of "voluntary" cooperatives to reap the benefits of scale economies. In some places tiny parcels of land are distributed equally to all for private consumption. The remaining land is then auctioned off and subjected to heavy "contract" quotas and collective extractions and extortions.[22]

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[20] Aubert, "The Agricultural Crisis in China," p. 17.

Since ideas, including half-baked ones, do have consequences, the result in China of applying over the last decade selected, pasteurized, partial, truncated, restricted, and disjointed bits and pieces of market and private property policy—which lacked internal logic and was at odds with partially dismantled but not dead, remnant bureaucratic instrumentalities of the command plan—has been systemic disarray. It is not a mixed system but a mixed-up one, a jumble of two jigsaw puzzles thrown together with many parts missing, a "confused economic order," as Liu Guoguang euphemistically calls it, an institutional and theoretical mess, where things work at odds and official corruption flourishes in the cracks between unfinished markets and discombobulated plans.[23]

The problems that have beset the Chinese economy since 1985 include open and hidden inflation and unemployment, loss of control over the money supply, growing income disparities, too much industrial and too little agricultural investment, massive subsidies, budget deficits, industrial overheating, agricultural underheating, credit crunch, loss-making enterprises, unpaid farm deliveries, neglect of rural infrastructures, excessive parceling of landholdings, mounting foreign debt, growth and strengthening of local monopolies, official corruption, as well as long-standing shortages of useful and surpluses of useless goods, technological sluggishness, and distorted behavior in response to perverse incentives. All of these problems are not the results of too much marketizing and privatizing, but of too little. Chen Yun, no friend of market reform, once said that the relationship between the market and the plan is like that between the bird and the cage. The bird should be allowed to fly, but within the framework of the cage. Otherwise it will fly away. In the Great Leap Forward, Mao crushed the cage and killed the bird, with resulting systemic nihilism and instant chaos. More slowly ("crossing the river while groping for the stones") Deng Xiaoping enlarged the cage and opened the door a little to the outside world. He also clipped the wings of the bird so it could not fly. The results, although certainly less seismic, are systemically similar to those of the Leap. What has emerged—in consequence of the mistaken idea that a few nuts and bolts from the market system can be used at random to revitalize socialism in a trick of third way social engineering—is yet another nonsystem.

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[21] Adi Ignatius, "A Tiny Chinese Venture into Capitalism Feels Icy Chills in Wake of Crackdown," *The Wall Street Journal*, March 8, 1990, p. A11.

[22] Aubert, "The Agricultural Crisis in China," p. 19.

[23] Liu Guoguang, "A Sweet and Sour Decade," *Beijing Review*, January 2-6, 1989, pp. 22-29.

V. PROSPECTS

From late 1987 to early 1988 the Chinese economy reached a juncture at which a critical decision had to be made whether to cross the border to the market system, cope with the recurring crises of the existing half-way arrangement through fire extinguisher-type tactics and minor structural changes, or strategically retreat into central planning. The discussion on what course of action to take was conducted with remarkable professionalism, but not without bitter, albeit muted, ideological and factional-political struggles behind the scenes. A definitive decision was not reached at that time. In September 1987 those counseling (in Aesopian language) that the border be crossed appeared to gain the upper hand, but not for long. The economic situation (especially inflation, unemployment, industrial overheating, and grain output) continued to deteriorate. By September 1988 the centralizers, led by Chen Yun, had regained the initiative in the name of caution, gradualness, and fairness. After the Tiananmen massacre of June 4, 1989, market reform as an idea and a movement was relegated to the lowest level. Once a subject dissected primarily on its technical merits, it was transformed overnight into an antagonistic contradiction, a bourgeois plot. Anxious international lending institutions, foreign bankers, investors, merchants, and governments were reassured that the open-door policy remained in force. After some slight hesitations and misgivings associated with a temporary deterioration in China's Moody ratings, this international element—including "compatriots" from Hong Kong and Taiwan—responded generously with their purse.[24] Internally, the National People's Congress was informed by Li Peng (March 1990) that China "will stand rock firm in the East," (a static version of Mao's "the East Wind prevails over the West wind"), no matter what the bourgeois goings on in other parts of the socialist world.

But to stand rock firm on the quicksand of the present nonsystem is simply not a viable long-term posture. The current neither-plan-nor-market arrangement is a key contributor (in addition to resuscitated Communist traditions, "acts of god," and mistaken policies) to the economy's shorter term problems such as inflation, unemployment, and the agricultural crisis.[25] Nor has China done

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[24] Jan Prybyla, "Tiananmen: The Economic Cost of the Open Door Massacre," *The American Asian Review*, Vol. 8, No. 1, Spring 1990, pp. 63–87; and *idem*, "The Economic Consequences of Tiananmen Square," Chapter 14 of *Reform in China and Other Socialist Economies*.

[25] For example, the agricultural (cereal) crisis: "According to the farmers themselves, grain prices have been the underlying reason for the growing disinterest in grain production and have resulted in the decrease in both the grain cropped area and the use of fertilizer for grain culti-

Continued

anything constructive about the deeper and longer term problems of waste, technological retardation, and perverse incentives. It has merely brought out into the open problems that for long had been hidden. As under the plan, agriculture continues to finance rudderless industrial development. Other rural problems include increasingly adverse terms of trade for peasants, threats of recollectivization and/or land nationalization, reduction in the duration of land leases, financial restrictions on and bankruptcies of rural industries that once provided farmers with additional income or alternative employment, the resulting return in 1990 alone of an estimated 15–20 million people formerly employed in such industries plus some 5 million from the cities to already overstaffed field work, and obstacles (including physical customs barriers) to interregional trade put up by local authorities. To stand rock firm on unfinished reforms juggling ad hoc expedients is no strategy at all; it may relieve some symptoms for a while, but is ultimately self-destructive. In China's present condition, keeping the door open to foreign loans, investment, technology, and business know-how is useless for China on the long view, and profitless for the foreigners who for reasons of an elusive and illusory future potential keep walking through the door with technophiliac enthusiasm into systemic chaos.

To unfulfilled material expectations and rising worker and peasant discontent, the massacre of Tiananmen Square and the subsequent physical repression and mental obfuscation have added a deep and lasting alienation of the intellectuals, young and old alike, a devastation of the human spirit. Without the participation of the thinking class and the freedom to think, China will never modernize. The alienation of the intellectuals goes beyond disagreement and disappointment with individual leaders. It extends to the Communist party and most of what it stands for.

One false remedy for the present systemless condition in which the Chinese economy is mired is to return to central planning—to rebuild as best one can the partly dismantled cage. This appears to be what the "hardline" post-Tiananmen leadership is doing. Prices will not be freed; on the contrary, more prices are to be set by the planners. The prospect, therefore, is for continued price irrationality. What little decision-making latitude had been granted to firms is to be curbed to assure that planner-sanctioned projects are not starved for funds and materials. Allocation of key industrial inputs (energy, raw materials) is to be increasingly subject to physical rationing ("unified distribution") by the Bureau of Supplies, and allocation of industry-based inputs and infrastructural state investments to agriculture is becoming increasingly contingent on the tenant farmers' adhering to planners' output preferences. Unap-

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vation. Numerous Chinese economists, too, consider that the price problem is the source of the cereal crisis. . . . In fact, both the farmers and the economists are right, and prices are the basic factor behind the current crisis: peasants respond well to cereal prices which serve as their point of reference and the basis for their activity. But the reference prices do not necessarily coincide with the average price they get from the state. . . . Under [the various] constraints, farmers are not interested in the average price at which the state will finally pay them, but far more in the difference between the 'contract' and 'negotiated' prices which are imposed on them, and the market price. Needless to say, the difference is a dissuasive one for the cereal producers who see themselves being obliged to sell their harvests at prices 25–50% below those they could obtain on the free market. Aubert, "The Agricultural Crisis in China," pp. 6–7.

proved extraplan investment is to be penalized by taxes, and investment in general is to be administratively recentralized. The expansion of private businesses is to be more strictly controlled by government departments and spontaneous ("anarchic") growth of the private sector discouraged by levies on "unreasonable" profits. Recentralization will also apply to foreign trade operations. Whether these intentions can be carried out in China's present destructured and corrupt economic condition remains, however, in question.

What is certain is that, should the intent succeed, China's fundamental problem of inefficiency will remain what it has been since the cage was first built. Return to even an updated, mathematized, computerized central planning system decidedly will not solve China's quality problem. In fact, it is this very system that created the problem in the first place. The quality problem will simply be driven underground, hidden from view, and not too well at that. Certainly by reason of its enormous capacity to institutionalize waste, technological lag, and perverse incentives, and because of its origins in an erroneous idea about the nature of extended social orders, China will remain permanently underdeveloped and poor, and the distance separating it from the world's dynamic market democracies lengthens as the years go by.

But there are indications that the intent will not succeed. The decade of the 1980s demonstrated that there is strong sentiment in favor of market reform (and political democracy) in the ranks of China's thinking class, particularly among the young, because only market reform (accompanied by liberalizing changes in the political environment) can put to good use the country's vast unrealized potential ability. Added to this are the mounting material frustrations of urban workers and peasants. Since neither the systemlessness of the present nor return to discredited central planning is capable of addressing China's fundamental problem of the quality of economic performance, and barring a crossing of the border into the market system, the prospect of an economic implosion—a house of cards-like collapse of the economy—is highly probable. Such implosion and its accompanying political disturbances can be averted by change in the present leadership through acts of god, attrition, factional elimination from above, or popular dynamiting from below, and the replacement of those now in charge by people who have the systemic understanding and the political will to take China out of the remnants of the plan into the market system.

VI. CONCLUSION

The present (1990) nonsystemic situation in which a partially dismantled plan conflicts with an unfinished market is not viable in the long run. Formerly hidden problems, among them inflation and unemployment, coexist with the deeper and unsolved problem of inefficiency made up of waste, technological retardation, and bizarre incentives. In this situation, the institutional preconditions for applying market remedies do not exist and administrative remedies no longer work. Persistence in the nonsystem would mean that the economy lunges from crisis to crisis, going nowhere. Tensions and alienations cumulate in the ranks of peasants, workers, and intellectuals. It is a relatively short act, ending in collapse within a few years.

A return to (an updated) system of central administrative command planning, which appears to have been put on the Chinese leadership's technical agenda in September 1988 and was inscribed in dogma after June 4, 1989, will deal with visible short-term problems by ordering them to be gone, that is, by hiding them (for example, price freezes that translate into suppressed inflation; or replacing open unemployment with overstaffing, that is unemployment on the job). It will do nothing to solve the structural problem of inefficiency of which it is the parent. A return to a fully fledged central planning system may be difficult for several reasons, including deterioration of the plan's institutions, the discredited state of central planning theory, and the intuitive knowledge on the part of most people, supported by several decades of field experience, that the system is a dead end and a recipe for waste, technological lag, and wrong-headed incentives. If actually accomplished, plan recidivism could postpone the economy's collapse by perhaps as much as a decade; but it cannot prevent it.

Economic logic dictates that the way out of China's systemic problem of chronic qualitative underperformance is to reform the plan into a market system. Chances are that this logic will prevail in China and the needed systemic transition will be accomplished. Whether this will be done in the 1990s, as I believe it will, depends to a considerable extent on the order of leadership succession through natural causes, purge, or revolutionary prodding from below: who goes first, and when, and who is left to do it. For "it really is of importance not only what men do, but what manner of men they are that do it."

III. SOCIAL AND HUMAN FACTORS

OVERVIEW

By Leo A. Orleans *

Although it is difficult to generalize or tie together the disparate chapters under "Social and Human Factors," each of the subjects covered has a direct bearing on China's economy. And, in fact, they have as much or more bearing on China's future as any topic covered in these two volumes.

For almost 20 years issues relating to China's population received considerable attention in the U.S. media. Demographers were impressed by the drastic reduction in fertility experienced after 1970 and by the ambitious and audacious one-child program initiated in 1980. Human rights advocates were upset by what they referred to as "draconian" family planning measures initiated by Beijing, and were only partially pacified by the Reagan Administration's termination of support to the International Planned Parenthood Federation and the withholding of some of the grant money to the United Nations Fund for Population Activities—both organizations believed to support China's policies on abortion. As a result, after years of both positive and negative publicity, a large segment of the American public became surprisingly knowledgeable about the magnitude of China's population, her family planning policies, as well as her problems associated with employment, education, urbanization, and other related issues.

In the last few years—aside from the spate of news items that appeared when China's population passed the billion mark—the frequency with which information on China's population appeared in the popular media has greatly diminished. In part because of the foreign outcry against reports of coercion in family planning and in part because following the dissolution of the communes the central government lost much of the clout it had over prescribed family planning measures, Beijing has, somewhat surreptitiously, retreated from the one-child family concept for rural couples. Moreover, aside from the spurt of negative publicity associated with the 1989 Tiananmen tragedy, the world has become much more preoccupied with the dramatic events in the Soviet Union and East Europe. For the most part, China has slipped off the front pages of newspapers around the country.

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And yet, issues stemming from the size and rate of growth of China's population are just as important now as ever. Although the birth rate in China is once again on the rise, it is fortunate for China (and for the world) that the authorities continue to assign high priority to family planning—albeit minimizing the use of measures that have created such negative publicity around the world. Those who continue to suggest that China should relent in her intense pursuit of reducing the number of births might consider the fact that, were it not for abortion, China would have had at least 100 million more births in the last decade—to say nothing of the births that were prevented because of the many tens of millions of IUD insertions and sterilizations. It is an interesting exercise to contemplate the status of China's economy today if there had not been some 20 years of concerted government efforts to reduce fertility.

As demographers and China scholars, both Judith Banister and Tyrene White are fully aware of the extent to which China's success in achieving her modernization goals depends on a variety of population issues; their conclusions, however, are more scholarly and measured than mine.

* * * * *

In the short space available, Banister manages to cover all the major issues associated with population, from health issues, to fertility trends, to problems of finding gainful employment for a rapidly growing labor force. On the basis of current trends she predicts that China's mid-1990 population of 1.12 billion will be close to 1.3 billion by the turn of the century. It is easy to get lulled by "the look" of these figures, until one stops to realize that they refer to billions and that over the ten-year period China's population is likely to increase by over 150 million!

In view of the frequent references to China's urban population throughout the two volumes, Banister's brief treatment of the confusion associated with defining and counting urban population becomes especially important. By broadening the definition of "urban" to include large numbers of rural folk living within the wide-ranging urban boundaries, the Chinese have been reporting (for some years now) unrealistically high and therefore confusing urban population figures. As Banister points out, the 1990 census addressed this problem, and by significantly tightening up on the previous definition has come up with a much more realistic urban total of 300 million, or 26.2 percent of the total population.

I would only question the validity of Banister's last sentence suggesting that, were China to shift to a market economy, her "population growth will not appear such a formidable problem." It is, however, a hopeful way to end a chapter.

* * * * *

In her treatment of China's population dilemma, Tyrene White focuses on the conflict between state-planned child bearing and market reforms and the consequent difficulties of enforcing compliance to the one-child policy in the countryside. Under a command economy cadres were rewarded for accomplishments in reducing fertility and therefore were motivated to enforce birth planning regulations. Now, according to White, local leaders are rewarded for economic achievements first and only get "applause" for low birth rates. Three other factors have been important in causing birth rates to start creeping upward by the second half of the 1980s. First, as the authority of the cadres has greatly diminished, peasants no longer fear them; second, the peasants have become much more mobile and can now have their babies in other localities; and third, funding for birth planning work has been greatly reduced.

It is interesting to note that in family planning, as in many other endeavors in China, there can be a broad gap between a policy and its implementation and that a change in policy is not necessarily preceded by an official announcement. Thus, although the State Family Planning Commission has never admitted an easing of the one-child policy, maintaining that the problem has not been with the policy but with its enforcement, in most areas—after an interval of several years—couples whose first child was a daughter have been permitted to have another child in hopes that it would be a boy. Moreover, many rural families continue to have multiple births and, if necessary, willingly pay the fines.

White concludes that, just as in the case of the economy as a whole, birth planning has been plagued by a "skewed incentive systems that reward 'undesirable' behaviors and decisions, encourage corruption, and waste scarce resources." Finally, it is difficult to disagree with White's prediction that, as China contemplates a population of 1.5 billion by the middle of the next century, her leadership is unlikely to abandon the principle of state-regulated childbearing for a long time to come.

* * * * *

The concept of social security is new to China where, whenever possible, the family has always been relied on to provide support in time of need—be it sickness, old age, or unemployment. While for most of China this is still the case, after 1949 Beijing began to experiment with its own version of a social security system that would provide such support for workers and employees within the urban state economic sector—a system that created a gross inequity between the rural and urban populations. However, this inequity and its implications are not the topics of Lillian Liu's chapter; she limits herself to a detailed discussion of the provisions now in effect for the state-sector workers in China.

It is important to understand that whereas in the United States social security is limited to cash benefits for old age, survivors, and disability, for the Chinese urban worker employed in a state enterprise social security constitutes only an extension of a comprehensive package referred to as the "iron rice bowl" by the Chinese. As a member of a *danwei* or work unit, the worker is already entitled not only to life-long employment but also to low-cost housing and extensive food and nonfood allowances. This cradle-to-grave security is obviously attractive to most Chinese workers and the fact that such a system is now considered by many to be a drag on economic efficiency has done little to change it.

Liu points out that a decade of policy changes and experiments with the social security system, originally introduced in the 1950s, has left problems of inadequate funding (despite almost an eightfold increase in budget between 1978 and 1988), inefficient administration, widespread mismanagement, and large discrepancies between the guidelines set out by the central and local governments and their implementation by individual enterprises, which constantly seek ways of cutting social security costs. Moreover, since workers do not contribute to the funding of social security programs and are still tied to their enterprise for housing, schools, and other benefits, the system discourages the mobility that would be necessary in a market-oriented economy.

Beijing's efforts to overcome many of these problems is made much more difficult by the widespread perception among the workers that social security programs are unreliable. But even if China manages to overcome some of the obstacles currently plaguing the social security system as it is now constituted—and Liu is skeptical that in the near future success will be possible—it is well to remember that the system will still exclude 75 percent of the population living in the countryside and an even larger proportion of the labor force outside the state sector. And finally, the responsible leadership understands very well that only when old age security does not depend on having a male offspring, will China be able to achieve her goals in reducing fertility.

* * * * *

Baruch Boxer's chapter, "China's Environment: Issues and Economic Implications," might have fit in several other sections of the volume, but it is not at all out of place under "Social and Human Factors."

The retort of developing countries when pressed by advanced countries to show more concern about environment has become quite familiar. They usually insist that measures to control environmental degradation would adversely affect their efforts to industrialize and modernize their country. "Did you worry about pollution when your country was undergoing industrialization?" they ask. In a country with over a billion people, problems stemming from environmental degradation are much easier to understand than elsewhere, but the leadership is plagued by the familiar problem of cost and the ever-growing demands for pieces of the national budget. In China this tug of war between environmental needs and modernization is taking place internally and is therefore especially frustrating.

In his chapter Boxer discusses the early recognition by Beijing of environmental problems and both the successes and failures in the efforts to control them. On the plus side, he mentions the wide-ranging environmental laws and regulations, the numerous educational and propaganda campaigns in support of environmental protection, and the government's support of extensive scientific and technical research and monitoring programs. On the negative side, Boxer deals with the many examples of environmental abuse relating to water, air, and waste management, the confusion over ends and means in environmental protection, and the consequent problems associated with the implementation of environmental regulations when they come up against local attitudes and economic realities.

Although stressing the difficulties of analyzing the economic implications of environmental issues, Boxer raises some interesting questions about steps that might be taken by Beijing, and about what, if any, should be the responsibility of foreign enterprises and the multilateral development agencies as they invest in China's modernization. He concludes that with the exception of a few more advanced areas, it is unlikely that at this time the government has "the expertise or will to implement a national program that can respond satisfactorily to China's special problems of size, physical diversity, resource imbalance, and population concentration."

* * * * *

Carol Hamrin makes a strong argument that the relationship between the intellectuals and the state has become the central political problem in China. And indeed, it is undeniable that the love-hate relationship between the Beijing leadership and the university-educated segment of the population has been a serious drag on China's cyclical efforts to modernize the country, with the Cultural Revolution representing the height of this antagonism.

Hamrin discusses some of the background in the evolution of this relationship, with an emphasis on the 1980s. She tells of the high hopes for change in the country during the mid-1980s, the increase in political activism, the gradual erosion of confidence in the leadership, culminating with the tragic events in the spring of 1989. She lists the intimidation tactics after Tiananmen and the symbolic measures taken to pacify the intellectuals. She discusses the negative effects China's internal and external brain drain over the past several years, and ends her chapter by concluding that many of the policy errors are due to the isolation of the leadership from the people. Understandably, Hamrin has almost given up hope of any meaningful change in China as long as the current aged or aging leadership is in place, but she does believe the future could be brighter. In her view, the younger leadership is bound to be more forward-looking and will understand that the support of intellectuals will be needed for China to progress into the twenty-first century.

Indeed, the plight of Chinese intellectuals has become well known around the world. They have neither the freedoms, the salaries, or the "creature comforts" we would presume them to have. I do, however, have some important differences with the author and, despite space limitations, I must note at least two of them.

First, Carol Hamrin leaves the impression that the distrust and abuse of intellectuals by the Chinese government started with Mao and the communist regime and that the current repression and alienation of intellectuals is somehow unusual. This, of course, is not the case. Although, as she points out, the traditional practice was for intellectuals to assist and advise the leadership, this reliance was usually limited to revolutionary periods when an emperor or other leader was in the process of assuming leadership. Once the leader came to power, the relationship quickly changed from reliance to distrust and mistreatment of intellectuals. This was even more evident after the social and political turmoil of the twentieth century, when intellectuals, who were so deeply involved in every political upheaval, quickly became suspect as potential troublemakers. Thus, many intellectuals under Chiang Kai-shek fared little better than the Confucian scholars under the various emperors. The current leaders are as nearsighted as were their predecessors. Tradition!

Second, my view is that the intellectuals' disaffection is not nearly as widespread as Hamrin suggests and that the student-led democracy movement in the spring of 1989 did not have the overwhelming support of intellectuals—especially when using the broad Chinese definition of the word. In fact, China's democracy movement represents the views and aspirations of a small, elitist group of humanists and social scientists who want a greater voice for themselves and frankly disdain the notion that the Party should be more responsive to the Chinese masses. Moreover, with the notable exception of Fang Lizhi, there was an insignificant number of scientists and engineers—by far the largest college-educated group—among Hamrin's "intellectual pace setters and pioneers."

To my mind the best one-sentence analysis of what happened in Tiananmen in the spring of 1989 was by Esherick and Wasserstrom:

> As essentially nonviolent demonstrations that posed no direct economic or physical threat to China's rulers, the power of the protests derived almost exclusively from their potency as performances which could symbolically undermine the regime's legitimacy and move members of larger and economically more vital classes to take sympathetic action. (Joseph W. Esherick and Jeffrey N. Wasserstrom, "Acting Out Democracy: Political Theater in Modern China," *The Journal of Asian Studies*, Nov. 1990, p. 839)

* * * * *

In her chapter on "The Impact of Mao's Legacy on China's Reforms," Marcia Ristaino argues that the Maoist tradition continues to permeate all sectors of the society and body politic and that the current leadership relies on Marxism-Leninism-Mao Zedong Thought to achieve the prescribed goals and solve the country's problems. She believes that despite the destructive Cultural Revolution, Mao continues to have "a deep emotional connection with China's people," and one must agree with Ristaino that Mao, more than any other leader, is associated with China's having "stood up" as a people.

In the first half of her chapter, Ristaino discusses the successes and failures with which Mao has been associated. Maoist tradition was most successful in the rural areas where, through inspiration and indoctrination, he managed to bring basic health care services, education, and other social programs to the peasants. Using his guerrilla heritage as a guide, Mao also successfully utilized the military, not only as a fighting force, but also in civilian affairs, where it participated both in the preservation of social order and played important political and administrative roles. As to economics, culture, and politics, Maoist initiative-stifling ideology and his insistence on centralized control thwarted China's development. Ristaino provides a good summary of Maoist economic policies and contradictions. One of the notable contradictions is that while Mao taught self-reliance and denigrated bureaucracy, his highly centralized system of production fostered dependence and lack of initiative.

The second part of Ristaino's paper is entitled the "Post-Mao Challenges." Here, I agree with much of what she says, but it seems to me that the material she presents contradicts her major thesis: the continuing influence of Mao's legacy. She talks about how increased urbanization has eroded Maoist values and exposed the population to many new ideas; she correctly points to the government's apprehension over the expanded media and communications systems and the freedom of expression which blossomed before to the Tiananmen crackdown; and she touches on the many challenges that the Maoist tradition faces from abroad.

Ristaino believes that, while China's better-educated urban youth does not subscribe chapter and verse to Mao's teachings, some of them now look up to him and the security provided by his authoritarian, centralized model. Perhaps. But I think that there are two more important reasons why Mao's picture is showing up in Chinese homes. First, it is one of the few safe ways to express displeasure with the current leadership; and second, it is a sad commentary on the absence of contemporary leaders for young people to look up to.

I would say that, although there is a considerable overlap between the two, the legacy of tradition is much stronger than the legacy of Mao in today's China. And, as we all know, for over a decade now, the Chinese leadership has been struggling with the impossible task of retaining China's "Chineseness" (traditions), while modernizing and opening to the outside world. They are not anxious to return to Mao.

CHINA'S POPULATION CHANGES AND THE ECONOMY

By Judith Banister *

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SUMMARY

This article briefly describes broad demographic trends in China during the 1980s and 1990s, and how they relate to economic trends. The population continued growing during the 1980s because of low mortality, declining age at marriage, fertility slightly above replacement level in most years, and a young age structure. China has achieved rather advanced mortality conditions for a developing country, with apparent further improvement in the 1980s. The death rate is expected to remain low, which will foster continued population growth. During the early 1980s, age at marriage declined in China, which tended to increase the birth rate. But government pressure to postpone marriage may now have arrested this trend.

China's one-child policy is still in effect and has been very successful in urban areas. But in rural areas it has met with continuing resistance. The national and provincial governments have now backed down to the point of allowing some rural couples to have a

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second child. Couples of the Han Chinese majority ethnic group are forbidden to have more than two children, and the determination of the authorities to stop them has succeeded in continually reducing the proportion of all births that are third and subsequent births. It is expected that fertility levels and population growth rates will remain about the same in the 1990s. If China's Communist government were superseded by a more democratic one, however, compulsory family planning would probably cease, and fertility and the population growth rate would rise.

During the decade of economic reform from 1978 through 1988, China's economic boom facilitated rapid job creation. The employed population increased at 3.0 percent a year while the population of labor force ages grew at 2.5 percent annually. Some of the new jobs were in agriculture, but nonagricultural employment increased at over 6 percent per year. Therefore, the economic reforms helped to further the transformation of China's economy out of agriculture into industrial and service sector employment. This structural change is much needed because there is a huge surplus labor force in agriculture. But the economic retrenchment policies adopted in late 1988, and the political crackdown of 1989, brought on an economic slump and at least temporarily stopped the economic transformation of China's employment structure.

The economic reform period also saw increased geographical mobility of laborers. While some moved to nearby towns, others flooded into the cities or headed for coastal zones where factories now produce for export. Rural-to-urban migration of workers was one component of China's urbanization trend in the 1980s. Though the current economic slowdown is causing some nonagricultural workers to return to their villages and to farming, it is likely that the urban demand for rural workers will remain important in the 1990s, and that rural-to-urban migration will continue.

China's population will probably continue growing at around 1.4 percent a year in the 1990s, and the total population is expected to be close to 1.3 billion by the year 2000. If the economic slump and political stagnation continue, this population growth could exacerbate problems of food supply, employment, and living standards, but if China's rapid economic development resumes, this rate of population growth would be more manageable.

I. INTRODUCTION

China's population size is so huge, and each annual increment to the population so enormous, that we cannot ignore how China's demographic conditions impinge on the country's economic development and quality of life. During the tempestuous years 1957–1977, for example, grain production and population size increased by about the same amount, leaving per capita grain output hardly changed after two decades. Since the beginning of the economic reform period in 1978, the interplay between economic and demographic trends has become much more complex than before. For instance, the sharp increases in agricultural production during 1978–1984 gave China some safety margin in its food supply. Yet the loosening of economic controls over the farmers, which had brought about the surge in agricultural output, also weakened the ability of officials to prevent unauthorized rural births.

The general economic boom of the reform decade 1978–1988 produced a doubling of per capita income accompanied by visible improvement in living standards in both urban and rural areas. Population growth continued, but was so much slower than economic growth that per capita gains in food supply, housing, and consumer goods were impressive, at least for a while. This article briefly traces the interactions between population changes and economic trends in China since 1978, emphasizing the most recent years and prospects for the 1990s. Table 1 includes some available economic and per capita economic indicators for this period.

China, the world's most populous country, counted a total population of about 1.13 billion people in 1990, constituting 21 percent of the world's total population and fully 28 percent of the population in developing countries. Since China's landmark 1982 census, the population has grown 1.47 percent a year on average. This growth rate is very low for a developing country, but in the context of China, it has meant an additional 126 million people in only eight years!

II. MORTALITY AND HEALTH

During the 1980s, the rural people's communes were dismantled, and so were the cooperative medical systems that had been organized and highly subsidized by the production brigades under the communes. Now, in most of China's rural areas, health care has shifted to a fee-for-service system in which the former rudimentary arrangements for health and major medical insurance are gone. Some localities have made ad hoc attempts to guarantee minimal health care to everyone regardless of ability to pay. It is unclear how many people are now experiencing reduced access to medical care as a result of the economic transformation of China's rural areas.

Despite some deterioration in China's famous system of preventive and primary health care for the rural population, the data so far available suggest that during the 1980s, survival chances improved for the rural as well as the urban populations at most ages for both sexes.[1] One exception to this generalization is the mortality trend for infants. According to China's 1988 two-per-thousand-population fertility survey, China's infant mortality rate declined sharply through 1977, then stabilized for a full decade through 1987 at approximately 40 deaths in the first year of life per thousand live births.[2] Until death and age data from the 1990 census become available, it is impossible to document mortality trends in China during the most recent years, nor can we even be certain that mortality above infancy did decline during the 1980s as indicated by presently available statistics.

How is it possible to explain the apparent improvement in survival chances for most age groups except infants, in spite of the disarray in the rural medical system during the economic reform decade? The weakening of primary health care may have affected prenatal care and the maternal and child health network the most, which would help explain the lack of further improvement in infant survival. But the doubling of living standards greatly improved food supply, nutrition, and the quality and quantity of housing, all of which may have increased survival chances above infancy. People have chosen to spend some of their higher incomes on medical care and pharmaceuticals, and the numbers of doctors and hospital beds per capita have grown, as shown in Table 1.[3] China worked with the United Nations Children's Fund (UNICEF) and the World Health Organization in the 1980s to immunize over 85 percent of the children in each province against six major diseases, thus greatly reducing child mortality from infectious disease. The government has claimed progress in improving water supply and water quality for most of the rural population in the 1980s decade.[4] Therefore, the economic boom has given people more resources to use for prolonging life and improving health, while the government has continued its emphasis on preventive strategies such as immunization which can significantly reduce mortality.

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[1] Based on analysis of life tables from the 1982 census and the 1987 one-percent sample census. See Banister, 1990.

[2] "China's Infant Mortality Declines in Past Forty Years," *China Population Newsletter*, Vol. 6, No. 2, Apr. 1989, pp. 11, 18; and Banister, 1990, pp. 6–8.

China's low crude death rate contributes to the continuing population growth. The death rate is low, both because of China's great successes in reduction of mortality, and because the country still has a young age structure due to past high fertility.[5] In a young population, a high proportion of people are in ages with comparatively low mortality.

III. MARRIAGE AND THE TIMING OF BIRTHS

Changes in the ages at which women marry and bear children strongly affect annual fertility and population growth by spreading out births or bunching them together. During the 1970s China's government had successfully promoted and required higher ages at marriage in both urban and rural areas. Rising marriage ages significantly reduced the total fertility rates and crude birth rates of the 1970s.[6] But required postponement of marriage was not popular, and this policy was reversed in the revised Marriage Law adopted in 1980. Thereafter, the mean age at first marriage for Chinese women dropped from 23.1 years old in 1979 to 21.7 in 1985; this trend was seen in cities, towns, and rural areas.[7] In addition, there is some evidence that the average time interval between marriage and first birth (known as the "first birth interval") has been reduced in recent years.

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[3] China, State Statistical Bureau, Department of Agricultural Statistics, *Woguo nongmin shenghuo de juda bianhua* (Great Changes in the Lives of China's Peasants), Beijing: China Statistics Press, 1984; China, Ministry of Agriculture, Planning Bureau, *Zhongguo nongcun jingji tongji daquan* (A Complete Compilation of China's Rural Economic Statistics), Beijing: Agriculture Press, 1989, p. 563; *Statistical Survey of China 1990*, pp. 46, 109–110.

[4] Zhu Baoxia, "Clean Water Goal Set for Rural Areas," *China Daily*, June 9, 1990, p. 3.

[5] With survival chances the same, a country with a young population like China has a lower crude death rate (annual deaths per thousand total population) than a country with an older age structure.

[6] Coale, 1984, pp. 48–54. The "total fertility rate" is the average number of children who would be born alive to a woman during her lifetime if she lived through all her childbearing years and conformed to all the age-specific fertility rates of a given year.

[7] Wang, Riley, & Lin, 1990, Table 1.

Earlier marriage combined with a shorter first birth interval meant that Chinese women in the 1980s bore their children at younger ages than was the case in the late 1970s. The surge of marriages and the shortening of intervals between marriage and first birth caused a bunching of births, especially first births, in the first half of the 1980s. The government has been trying to reverse this trend, and since 1985 marriage age has stabilized or risen slightly.[8]

China's 1980s marriage boom was encouraged by an expansion of available housing space, and simultaneously increased the need for more housing units. The supply of housing escalated rapidly in the reform decade. Rural residents poured much of their newly increased income into expansion and upgrading of their existing dwellings and the building of new houses for family members. In cities, a boom in housing construction helped alleviate a desperate shortage of living quarters. Table 1 shows that living space per capita expanded in both urban and rural areas. Escalating demand for housing was driven in part by the surge of marriages, and housing construction in turn made it much easier for young couples to set up a new household.

IV. FERTILITY AND FAMILY PLANNING

A. THE ONE CHILD POLICY

Since 1979 China has been in the era of the well-known one-child policy. The rationale for this policy has been that it is unacceptable to allow the population of China to continue growing to 1.4 or 1.5 billion people, which is projected if people bear two children per couple. In 1979, the national government of China boldly presumed that it would be possible under current conditions to educate, cajole, or force urban and rural couples to cease childbearing after the birth of one child. In urban areas, the leadership's confidence was reasonably well-founded. The urban family planning program had been very effective since the early 1960s, and the total fertility rate of the urban nonagricultural population had been reduced to only 1.55 births per woman by 1978.[9] Throughout the 1980s, the urban total fertility rate was around 1.3 births per woman, according to official reports.[10] This is lower fertility than that of almost any country or city in the world, developed or developing, and must be seen as an unqualified success for China's one-child policy.

However, the official goal of one child per couple was severely out of line with rural reality. China's forceful family planning program of the 1970s had already resulted in a steep drop in rural fertility from 6.4 births per woman in 1970 to 3.0 births per woman in 1978, a remarkably rapid shift.[11] But rural couples continued to view it as necessary to have more than one child, including at least one son, to provide farm and household labor for the family. A widespread rural attitude is that sons, after reaching adulthood, are needed to carry on the family name, live with or near their parents, and care for their aging parents because a rural social security system is lacking. In addition to these traditional reasons for desiring several children, the shift from communal to family farming in the 1980s made households into economic production units that could potentially benefit from more children to work the fields, carry out sideline activities, transport and sell output, take jobs in rural enterprises and bring home the earnings, or migrate to a town or city and send money home. During the 1980s, occasional surveys asked rural couples about desired family size, and they almost always answered that two, three, or more children were preferred.[12]

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[8] Wang, Riley, & Lin, 1990, Table 1.

[9] China Population Information Centre, 1984, pp. 162–164.

[10] Wang Wei, "Guanyu jihua shengyu gongzuo wenti" (Questions about Family Planning Work), *Renkou yu jingji* (Population and Economy), No. 2, Apr. 1986, p. 4; Peng Peiyun, "Why I am Extending the Two-Child Option," *People* (International Planned Parenthood Federation, London), Vol. 16, No. 1, Jan. 1989, p. 12.

[11] China Population Information Centre, 1984, pp. 165–167.

From 1979 through 1983, the Chinese government escalated the pressure on rural couples to stop at one child. This policy applied to the majority Han Chinese population; China's 55 minority groups, who constituted 7 percent of China's total population according to the 1982 census, have been encouraged to limit fertility but not required to abide by the one-child rule. What evolved in the early 1980s was a requirement that Han Chinese women with one child accept the insertion of an IUD which would not be removed on request, and that couples who had managed to bear two children in spite of the one-child policy or before it was implemented were required to have one partner sterilized. In many rural as well as urban areas, family planning workers monitored the menstrual periods and pregnancy status of each married woman of childbearing age, so that an abortion could be required for pregnancies outside the local official birth plan. The coercion level reached its peak in 1983, when family planning surgery teams swooped into villages and carried out mandatory sterilizations, IUD insertions, and abortions on those women deemed "eligible." That year, the number of each kind of birth control operation peaked in China at 21 million sterilizations, 18 million IUD insertions, and 14 million abortions (Table 2).

B. EVOLVING FAMILY PLANNING POLICIES

The strength of the rural backlash against the coercion campaign was never directly reported in China's media and must be indirectly inferred from other evidence. Suddenly in early 1984, previously scheduled family planning campaigns were called off, the director of the family planning program was replaced, and "Document Number 7" was promulgated. This national directive was never published, but was referred to for some years. It counseled that, (in contrast to the 1979–1983 period), "family planning policies must be built on a foundation that is fair and reasonable, supported by the masses, and easy for the cadres to carry out."[13] Document Number 7 directed that rural couples with "real difficulties," thought to constitute no more than 5 or 10 percent of rural couples, might be given permission to have a second child.

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[12] Karen Hardee-Cleaveland, "Desired Family Size and Sex Preference in Rural China: Evidence from Fujian Province," Ph.D. dissertation, Cornell University, 1988; "The Impact of Rural Family Functions on Fertility Rate," *China Population Research Leads* (Shanghai Population Information Center), No. 2, July 1988, p. 2; *Population and Family Planning*, (Beijing: Foreign Languages Press, 1990), p. 11.

[13] Peng Zhiliang, "Tan jihua shengyu zhengce yao heqing heli" (Family Planning Policy Must Be Fair and Reasonable), *Jiankang bao jihua shengyu ban* (Health Gazette, Family Planning Edition), June 29, 1984, p. 3.

Meanwhile, through all this turmoil, rural fertility remained above two births per woman on average. Since 1983, rural couples have continued their struggle to have two, three, or more children in spite of official prohibition. In many places in China, this is very difficult and requires getting an illegal IUD removal, hiding the pregnancy, and leaving the village on some pretense for most of the pregnancy until the baby is born. In other localities, however, the family planning system of regulation has broken down along with the commune system, and women are no longer being constantly monitored.[14] For a few years after 1983, the national government backed down a little and expanded the proportion of rural second parity births that were officially approved.[15] In some provinces now, peasants who have a firstborn girl are allowed a second birth (to try for a boy). In other provinces, all peasants are allowed two births per couple. But in the more developed provinces, the one-child limit is still being applied to many categories of rural couples as well as to urban couples; in Heilongjiang, for example, only a minority of villages may permit second births to couples with a firstborn girl. Now the national and many provincial governments are trying to reduce the proportions of rural couples who are authorized to have a second child.[16]

As of 1990, as far as can be ascertained, China's government is still trying to be as strict as it can get away with in enforcing a one-child limit for most urban couples and a one-child or two-child limit for rural couples. National and provincial governments continually exhort local cadres to hold the line on births; indeed, the harshness of the official rhetoric and the penalties to back up official demands have been escalating since 1986.[17] This policy appears to be successful; actual fertility in China is below desired fertility—that is, both urban and rural couples are bearing fewer children than they would without the compulsory family planning program. Today, family planning workers and "volunteers" for the quasi-official local Family Planning Associations continue to monitor the birth control, menstrual, and pregnancy status of the vast majority of urban women and most rural married women in the reproductive ages.[18] They often achieve their goals of preventing unapproved pregnancies through required IUD use or sterilization, and by securing the induced abortion of fetuses whose births are not authorized.

C. FERTILITY AND CONTRACEPTIVE USE

As shown in Table 3, China's birth rate has been steady at the low level of 21 births per thousand population annually for four years, according to State Statistical Bureau surveys. Since 1982, 51 or 52 percent of the births each year have been first parity births.

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[14] Greenhalgh, 1990, pp. 204, 216, 222-229.

[15] Birth parity means birth order.

[16] Details are compiled in Aird, 1990, pp. 59-89.

[17] This trend is well-documented in Aird, 1990, pp. 59-89 and Appendix B.

[18] Peng Peiyun, "Guanyu 1989-nian de gongzuo" (On the Work in 1989), *Zhongguo renkou bao* (China Population), Feb. 24, 1989, p. 1.

This is extraordinarily high for a developing country and attests to the success of the one-child policy. The main parity trend in the 1980s was a steep drop in the proportion of births that were third or subsequent children, a result of China's continuing official insistence that all births above second parity are resolutely forbidden except to members of minority groups. Meanwhile, the proportion of births that were second births rose to one-third, mirroring the slow growth until about 1986 of official tolerance for rural second births.

Today, China's compulsory family planning program is still functioning and keeping fertility low and more or less steady. Table 2 shows that each year, there are still 10–13 million IUD insertions, 3–6 million sterilizations, and 10–13 million abortions performed. Of married women in the reproductive ages 15–49, 71 percent are practicing family planning. Such a high contraceptive use rate is typical of developed countries but rare in developing countries. Of these couples practicing contraception, 49 percent have one partner sterilized, 41 percent are using an IUD, 5 percent are using the pill, and 5 percent other methods.[19] This means that a very high proportion of couples in China are using modern effective contraceptive methods which prevent pregnancy. Abortions, voluntary or required, are still heavily used to prevent births when pregnancies occur.

Fertility is very low in China, not far above "replacement level fertility," yet the population continues to grow at over 1.4 percent a year. This is partly because of age structure. China had huge cohorts born in the high-fertility period of the 1960s, who reached their twenties during the 1980s. Births are highly concentrated when Chinese women are ages 21–30, so this bulge in the age structure is tending to drive the birth rate up. This trend will be even more pronounced in the 1990s, when the huge numbers of women in their twenties could cause a "birth peak." As shown in Figure 1, the number of women aged 21–30 increased from 81 million in 1983 to about 106 million in 1990. The peak will come in 1993, with approximately 124 million women in their fertile twenties, and the number will decline only slowly to about 109 million in the year 2000 (see Figure 1). Therefore, the birth rate could rise in the 1990s if fertility per woman does not drop. China's government is concerned about the coming "birth peak," and therefore is attempting to reduce fertility further.

V. LABOR FORCE AND EMPLOYMENT TRENDS

A. ECONOMIC REFORM AND EMPLOYMENT GROWTH

Shifts in China's age structure have also meant that the population of labor force ages has been growing faster than the total population in recent years. For example, from the 1982 census to 1990, the population at ages 15–64 grew 2.5 percent a year while the total population increased 1.5 percent annually. During the decade from the adoption of the reform agenda in 1978 until the implementation of economic retrenchment in late 1988 and the political crisis of 1989, China's booming economy was successful at creating jobs for the growing working age population. The tremendous increase in the size of the employed population was due not only to vigorous economic growth but also to the continuing Chinese government attitude that full employment is essential, even if it comes at the cost of low productivity.

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[19] "The Nationwide Fertility and Birth Control Sampling Survey Ended Successfully," *China Population Research Leads* (Shanghai Population Information Center), No. 4, Apr. 1989, p. 3.

Official Chinese statistics on employment show that at the end of 1978 there were about 402 million people working (Table 1). The size of the employed population grew 3.0 percent a year to 543 million at the end of 1988, well ahead of the growth of population in labor force ages. In 1989 under economic retrenchment policies, official data still show employment growth of 1.8 percent.[20]

B. SURPLUS LABOR IN AGRICULTURE

It is characteristic of China that the employment participation rate of adult men is extremely high; this is also true of Chinese women, which is even more unusual in international perspective.[21] This phenomenon is partly a result of the practice in some localities of classifying those adults not working outside agriculture in the residual category of agricultural workers, even if their contribution to agriculture is marginal or sporadic. Workers in agriculture made up 60 percent of total employed workers in 1989.

The number of agricultural workers is high partly because Chinese agriculture is still at a low level of mechanization. On the whole, farmers make intensive use of the available arable land and water resources in order to feed the huge population, and this requires a lot of labor. Even so, Chinese policymakers recognize that the agricultural sector does not need so many workers. Chinese scholars estimate that approximately one-third of the country's farmers are underemployed, meaning that their efforts are needed only at peak planting and harvesting time. The surplus of adult workers stuck on the land holds down per-worker productivity in agriculture well below what it would be if these workers could be usefully employed elsewhere.[22]

C. EMPLOYMENT TRENDS BY ECONOMIC SECTOR

For the last decade, the emphasis in employment policy has been to create jobs for the rising tide of youth entering the work force in urban areas, and in the countryside to absorb some of the excess farm workers into nonagricultural jobs, agricultural sideline occupations, or the production of cash crops. In contrast to the earlier Maoist decades, national policy during the 1980s has allowed self-employment, permitted the reopening of rural and urban markets not run by local governments, encouraged rural enterprises to employ idle agricultural workers, and allowed workers to move in order to find jobs. Until 1989, the results were encouraging. During the period from 1978 through 1988 (based on year-end figures), while employment in agriculture increased at 1.3 percent annually, total nonagricultural jobs grew at a respectable 6.3 percent a year. But the retrenchment policies and upheavals of 1989 stopped the growth of nonagricultural employment; the number of jobs outside agriculture stayed at 220 million from year-end 1988 to year-end 1989.[23]

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[20] *Statistical Survey of China 1990*, p. 15.

[21] Taylor, 1986, pp. 222–230; Arriaga & Banister, 1985, pp. 170–172.

[22] Taylor & Banister, 1989, pp. 43–46.

Figure 2 shows that the growth rate of jobs in the industrial sector of the economy dropped from 7.3 percent in 1986 to 3–4 percent annually in 1987 and 1988. Then, however, urban layoffs and the closing of some rural enterprises in 1989 brought a decline in industrial employment from 97 million at the end of 1988 to 96 million one year later. Employment in the service sector, which had been increasing at 5 or 6 percent a year, grew at a modest 0.9 percent in 1989. Those who lost their nonagricultural jobs, as well as the new entrants to the labor force, either became unemployed, shifted to service sector work, or took up agriculture. It is clear from Figure 2 that the growth rate of employment in agriculture increased gradually from 0.4 percent in 1986 to 3.0 percent in 1989.

The return of workers to agriculture represents a (hopefully temporary) reversal of the long-term transformation of China's economy from poor, rural, and agricultural to a more urban, nonagricultural employment structure accompanied by much higher living standards. The setbacks of 1989, however, do illustrate the wisdom of the millions of rural families who, as a precautionary measure, have hedged their bets on China's economic transformation. Since 1978, rural households have acquired rights to the use of small plots of land in the family land contracting system. While utilizing this land to grow food for the family and for profit, household units have encouraged their members to get jobs in nearby rural enterprises, take up transport work, sell goods in markets, migrate for seasonal employment, or move to a city or town for an urban job.

However, even if all or almost all adult workers in the household took nonagricultural jobs, and most family income came from nonagricultural sources, families have strongly resisted giving up any of their land rights. Instead, such households have shifted to farming the land nonintensively or letting it lie fallow.[24] This system is wasteful of quality agricultural land, a phenomenon decried by both Chinese and Western economists, but makes good sense from the perspective of the household. In an economic recession, if household nonagricultural workers lose their jobs, they can temporarily revert to farming the land. Given the lack of a rural social safety net, land rights act as an insurance policy.

Urban workers who are laid off do not have this option, and many former rural residents who had moved to cities and towns resist moving back to the countryside. Therefore urban unemployment has grown since September 1988 when retrenchment policies, including a severe credit squeeze on collective and private enterprises, began to be implemented. China's unemployment statistics are still poor in quality;[25] rural unemployment is not captured in the statistics at all, and urban unemployment is underreported because it includes only those who have formally registered for work and are officially "waiting for employment." Figures on urban unemployment probably exclude unemployed migrants in urban areas who do not qualify for permanent residence there, and thus are not included in urban statistics. The official urban unemployment rate was 2.0 percent of the urban labor force from 1986 through 1988, then rose to 2.6 percent by the end of 1989.[26] By the end of March 1990, it was reported that 3 percent of the urban labor force in China was completely out of work, and another 3 percent was "partly out of work."[27]

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[23] Statistics in this paragraph are from China, State Statistical Bureau, Department of Social Statistics, *Zhongguo laodong gongzi tongji ziliao, 1978–1987* (China's Labor and Wage Statistics, 1978–1987), Beijing: China Statistics Press, 1989, p. 6; *Statistical Yearbook of China 1989*, pp. 106–107; and *Statistical Survey of China 1990*, p. 16.

[24] Sun Zhonghua, "A Glimpse of Grain Production from 1984 to 1988—A Survey of the Grain Output of 13,000 Peasant Households in 155 Villages" [In Chinese], *Zhongguo nongcun jingji* (China's Rural Economy), No. 3, Mar. 20, 1990, pp. 16–24, tr. as "5-Year Grain Production Slump Attributed to Peasant Apathy," *Joint Publications Research Service*, No. JPRS–CAR–90–046, June 26, 1990, pp. 78–79.

VI. Labor Migration and Urbanization

A. INCREASING MIGRATION OF WORKERS

In the Maoist decades, geographical mobility of Chinese families and workers was severely restricted and curtailed by the location-specific permanent population registration and rationing system. Though the vast majority of people did not move at all, there was a trickle of labor migration. Some laborers were required to move to border provinces, some were allowed to move to newly established industrial cities, and some were sent from their city homes to work in rural areas. Often when laborers moved, they were not allowed to bring their families with them.

This system is still in place, but in the economic reform period, restrictions on worker migration have been relaxed.[28] If surplus rural workers could not find nonagricultural work in the vicinity of their homes, the policy that evolved in the 1980s permitted them to travel elsewhere for work. The official guideline was to promote the development of towns and small cities all over the country so that they could absorb rural out-migrants locally. Especially popular with the authorities was allowing peasants to move to a nearby town to take an industrial job or set up a business, and permitting surplus workers from impoverished rural areas to move to a different rural area or leave for seasonal employment part of each year. Gradually, the Chinese government softened its former rigid opposition to allowing migration of rural residents into established urban areas. Workers were allowed to move to cities and towns under certain conditions, for example, if they were responsible for buying their own grain without rations or subsidy, if they brought capital with them to set up shop, if they came alone to work and did not bring a family, and if their legal registration location remained in the rural areas. Different urban localities set up different criteria.[29]

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[25] The quality of unemployment data from the 1990 census may be a considerable improvement over currently available figures.

[26] *Statistical Survey of China 1990*, p. 18.

[27] "Unemployment Increases in First Quarter," *Zhongguo tongxun she* (China News Agency in Hong Kong), May 29, 1990, translated in *Summary of World Broadcasts, Weekly Economic Report*, No. FE/W0131, June 6, 1990, pp. A1–A2.

[28] For details on this important policy shift, see Judith Banister, *Urban-Rural Population Projections for China*, Washington, D.C.: U.S. Bureau of the Census, 1986. Center for International Research, Staff Paper No. 15.

[29] For further information on worker migration from the villages, see Taylor & Banister, 1989, pp. 23–38.

In the 1980s, some migrants were formally allowed to move permanently to urban areas, and their legal household registrations were transferred to the city or town. Urban population statistics are so problematic that it is difficult to estimate the numbers of these formal, legal rural-to-urban migrants. After a complex series of calculations, it was possible to estimate that during 1985, net inmigration accounted for only about 1 percent growth in the total legal permanent resident population of China's cities; only approximately 1.9 million people were granted legal residence that year in the cities that had been established before 1985.[30]

More numerous are the rural-to-urban migrants who have not been granted the coveted city or town permanent household registration. People who are away from their rural legal residence are grouped together under the label "floating population," whether they actually moved permanently to the urban place ten years ago, or they left their village two days ago and are just passing through town. Some cities have periodically tried to count their floating populations, and relatively sophisticated cities like Shanghai distinguish among "temporary" residents who have been there for different lengths of time. For example, an August 1984 survey of Shanghai's estimated 590,000 floating population included 338,000 "temporary" residents living in established households, of whom one-third had been residing there for over five years and a total of almost one-half had been living there for over a year.[31] Yet the city had not granted them permanent residence, so they were not included in the reported population of Shanghai. Fortunately, China's 1982 and 1990 censuses both assumed that anyone who had lived in a certain town or city for a year or more was a resident of that place, so the censuses give more realistic counts of the populations of cities and towns than do city registers.

The floating population of Shanghai Municipality increased from 0.7 million by the end of 1984 to 1.11 million in 1985 and further to 1.25 million in October 1988, compared to a legal permanent resident population of 12.62 million at the end of 1988. Other cities and many urban towns have also reported floating populations that are large in relation to their legal permanent resident populations. By the end of 1989, a rough estimate of the floating population nationwide was given as 50 million, of whom 1.83 million were in Shanghai Municipality, 1.35 million in Beijing Municipality, and 1.1 million in Guangzhou (Canton) Municipality.[32] In February 1990, the floating population was estimated to be between 60 and 80 million people.[33] Statistics on the movement of China's workers and residents are unreliable so far, but Chinese statisticians are trying to remedy this situation using migration surveys and the 1990 census as tools.

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[30] In addition, China's city population total grew in 1985 through natural population increase (more city births than deaths) and boundary expansion, and most important, through the establishment of 29 new cities. A similar analysis could be carried out for some more recent years for which the data are now available. Judith Banister, "China: Components of Recent City Growth," presented at the International Conference on Urbanization and Urban Population Problems, Tianjin, Oct. 1987.

[31] Zheng Guizhen et al., "A Preliminary Exploration of the Problem of Shanghai Municipality's Floating Population," [in Chinese], *Renkou yanjiu* (Population Research), No. 3, May 29, 1985, pp. 2-7, translated in *Joint Publications Research Service*, No. JPRS-CPS-85-087, Sept. 4, 1985, pp. 33-43.

[32] Gu Chu, "Floating Population Puts Strain on Urban Areas," *Joint Publications Research Service*, No. JPRS-CAR-90-026, Apr. 9, 1990, p. 65; "Rapid Increase of China's Floating Population," *China Population Newsletter*, Vol. 1, Feb. 1990, p. 16.

[33] "Floating Population Nears 80 Million," *Joint Publications Research Service*, No. JPRS-CAR-90-020, Mar. 14, 1990, p. 58.

B. URBANIZATION

The urbanization of China's population is an important aspect of its economic and social development, but unfortunately the annual official urban statistics have become almost unusable without careful and time-consuming decomposition of the components of urban population growth. For example, the mid-year 1982 census counted an urban population of 206 million, which constituted 21 percent of the civilian population.[34] By year-end 1989, only 7 ½ years later, official statistics showed a total urban population of 575 million, 52 percent of the national population.[35] Such figures are usually rejected by Chinese and foreign scholars as unrealistic and misleading. The key problem is that in the 1980s hundreds of new cities and thousands of new urban towns were established, and most of these new urban places are seriously "overbounded." While each new city and town may have a genuine urbanized core deserving of urban status, the new urban boundaries are drawn so wide that they encompass large agricultural areas and populations. This problem is caused by the practices of transforming a former xian (county) into a newly established shi (city) and reclassifying a former xiang (township) into a new zhen (urban town) without adjusting the boundary to include only the urbanized area. The latest available statistics show that over half (53 percent) of the total permanent residents living inside the city proper boundaries of China's cities are designated "agricultural" population. Of the total zhen population, 75 percent is "agricultural." [36]

Because China's annual urban population statistics are so problematic, officials of the State Statistical Bureau (SSB) and other leaders of the 1990 census effort decided to define "urban" more narrowly for this census. The enumeration districts in China's censuses are local neighborhood committees in built-up areas and village committees in agricultural areas. The census leadership instructed that village committees, even those inside city and town boundaries, were to be classified "rural" for census purposes. Therefore, the 1990 census seems to have solved the overbounding problem, and the preliminary hand-tabulated result is that only 26 percent of China's population was classified urban in the 1990 census.[37] Comparing this figure with the 1982 census population recorded as 21 percent urban indicates that there has been only moderate urbanization in China during the 1980s. However, this comparison underestimates the speed of urbanization because 1982 census data need to be adjusted downward using the 1990 census definition in order to measure the trend.

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[34] China 1982 census volume, 1985, p. 26.

[35] *Statistical Survey of China 1990*, p. 14.

[36] Ministry of Public Security, *Zhonghua renmin gongheguo quanguo fen xian shi renkou tongji ziliao, 1988* (Population Statistics by County and City of the PRC, 1988), Beijing: China Cartographic Press, 1989, pp. 4, 8.

[37] "The 1990 Census," *Beijing Review*, Vol. 33, No. 45, Nov. 12–18, 1990, pp. 17–19.

VII. Prospects for the 1990s

A. THE CITIES

A rapid shift is taking place in the age structure of China's urban areas, especially in the built-up city areas, with major short-term and long-term implications. Because the fertility of China's urban nonagricultural population dropped in half from 1963 to 1966, then declined further in the 1970s and 1980s, school enrollments have declined or stabilized in many cities and towns, thus taking the pressure off the urban educational systems to provide more teachers and schools. The small urban cohorts born in the late 1960s and beyond are now beginning to join the childbearing ages and the labor force. The "birth peak" among urban nonagricultural people will be largely over by the mid-1990s. The need to provide greater numbers of entry-level jobs each year to increasingly large cohorts of urban-born youth will soon be history. In fact, without further in-migration from the countryside, China's urban population aged 15–29 would decline precipitously in size between 1990 and the year 2000.[38]

Population aging has also begun in China's cities. During the 1990s, China's urban areas will experience the aging of their labor force as the huge cohorts born in the 1950s and early 1960s begin entering middle age. The proportion of the urban population at ages 65 and above is expected to increase modestly from about 5 percent in 1990 to 8 percent at the turn of the century. This will not be a serious problem in the short run, but if China maintained its urban one-child policy, in the absence of in-migration the elderly proportion of the urban population would rise from 8 percent in the year 2000 to 17 percent in 2020, 33 percent in 2040, and 36 percent in 2060.[39]

Chinese municipal leaders and Chinese demographers advising the authorities are concerned about avoiding such severe aging of China's urban population in the future. They are already discussing reverting to an urban two-child policy at about the turn of the century, which would result in a greater number of working-age adults in the middle of the coming century to provide for the inevitably large numbers of urban elderly.[40]

A continuation of rural-to-urban migration of young adult workers is likely in the 1990s, especially if there is a resumption of China's economic boom and of the transformation into nonagricultural employment. Even with a long period of political stagnation and economic uncertainty, a distinct possibility, China's cities and towns will probably allow millions more peasants to come in to work each year. In the coming decade, there will be a strong urban demand for workers from the countryside, because of the sharp drop in the number of urban-born youth ages 15–29, because those raised in the city are less willing than peasants to do the least desirable jobs, and because there remains a strong unmet demand for all kinds of services in the cities and towns of China.[41]

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[38] Banister, 1989, p. 15.

[39] Judith Banister, "The Aging of China's Urban and Rural Populations," presented at the International Academic Conference on China's Population Aging, Beijing, Dec. 1989, p. 11.

[40] Judith Banister, "The Aging of China's Population," *Problems of Communism*, Vol. 37, No. 6, Nov.–Dec. 1988, pp. 71–73.

B. THE COUNTRYSIDE

Age structure shifts in rural areas are a decade behind those in urban areas, and are less pronounced because fertility has not dropped so low in the countryside. School-aged cohorts are no longer increasing rapidly in size, so the provision of basic education is less burdensome now. In the 1990s, couples in their peak childbearing ages will be much more numerous than in the previous decade, a situation which is causing concern about a "birth peak." Yet rural youth who were born in 1977 and later years, after the steep rural fertility decline of the early and mid-1970s, are half as numerous as some of the 1960s cohorts. As they join the work force in the 1990s, there will be a decrease in the number of rural entry-level jobs required. Unfortunately, this incipient beneficial effect of reduced rural fertility will do little to ameliorate the overwhelming need for hundreds of millions of jobs outside agriculture for the rural surplus labor force.

China's rural areas are burdened with a massive backlog of adults who are really not needed in agriculture but have been unable to find other work. During the 1980s, estimates of the number of surplus laborers engaged in crop production ranged from 60 million to 156 million, depending on the technique of estimation.[42] These farmers still need other work, yet the economic and political reversals of late 1988, 1989, and thereafter are crippling China's ability to create employment opportunities outside agriculture. As long as these reversals continue, we can expect very little progress in transforming China's economy into one dominated by nonagricultural work.

C. NATIONAL TRENDS

China has already achieved relatively advanced mortality levels. The death rate is expected to remain low. Further improvements in mortality and health conditions are likely to be slow, because of the intractability of the leading causes of death and illness today. Chronic diseases like heart disease and cancer are everywhere difficult to prevent or cure. In a poor developing country striving for rapid economic growth, cleaning up the polluted air and water has low priority, yet is important for reducing the prevalence of environmental diseases like parasitic and waterborne viral illnesses and respiratory ailments.

It is possible that age at marriage could rise again under official pressure, as happened in the 1970s in both urban and rural areas. But the Chinese people showed in the 1980s that this policy is unpopular, and that they will marry in their early twenties if feasible. A stalemate is the most plausible outcome. Administrative pressure to stop early marriages may already have arrested the decline in marriage age, but popular resistance will probably block full implementation of late marriage policies.

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[41] This is discussed more fully in Judith Banister and Jeffrey R. Taylor, "China: Surplus Labour and Migration," *Asia-Pacific Population Journal*, Vol. 4, No. 4, Dec. 1989, pp. 17-18; and in Banister, 1989, pp. 12-16.

[42] Taylor & Banister, 1989, p. 3.

In the 1990s we are most likely to see a continuation of the unstable equilibrium between frequent attempts by couples to have another child and continual pressure from the authorities trying to stop them. Fertility will not drop or rise dramatically under this scenario. With fertility and mortality not much changed, we can expect that China's population growth rate will continue to be around 1.4 percent a year, and that the total population will increase to 1.2 billion by 1995 and reach about 1.3 billion by 2000. This will obviously require further annual increases in food production and availability, which will not be easy given the dearth of arable land and the intensity of agricultural land use already.

If China's democracy movement were to bring about a significant shift in the power structure during the 1990s away from authoritarian Communism, one of the first policies to go would probably be compulsory family planning.[43] This would be followed several months later by a rise in fertility that would be expected to last for many years. Once the policy of required family planning is discredited, subsequent Chinese governments might be hesitant to promote birth control, if the situation in India since the cessation of mandatory sterilization is any guide.

In the 1990s, China's population in the labor force ages (defined as 15–64) will no longer be increasing faster than the total population. Rather, the pool of working-age people will increase at 1.2 percent a year as the population grows about 1.4 percent annually, and the population in the young working ages 15–29 will decline. As long as the economy is in a slump, it will remain very difficult to increase the number of nonagricultural jobs enough to employ the additional numbers of middle-aged workers. If agriculture continues to absorb them, this will exacerbate the already serious problem of the huge agricultural surplus labor force.

For the next couple of decades, China's population structure will be beneficial for economic growth and increased productivity. The population is becoming middle-aged. Because fertility has dropped so low, child dependency has greatly decreased. The population ages 15–29 will peak in 1992, then decline 15 percent in size by the turn of the century only eight years later. The burdens of education and on-the-job training will lighten considerably. Because the process of population aging has only recently begun for the country as a whole, a serious aged dependency burden is several decades away. With a low dependency ratio, and a bulge in the population in their thirties, forties, and fifties, China is entering its "Golden Age." These age groups tend to be those of highest productivity, reasonably robust health, low crime, and high savings rates. China's age structure of the 1990s and first decades of the next century will be beneficial for promoting economic take-off and social stability.

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[43] It should be noted that in Romania, the fall of Ceauscescu was followed immediately by cessation of the forced childbearing policy, which had utilized the same policies of harassing women and monitoring their birth control and pregnancy status as China uses, but for opposite goals.

VIII. CONCLUSIONS

The period of rapid population growth that China had experienced since the early 1950s had greatly strained the process of economic development and transformation, the limited supply of arable land, the environment, and the political leadership trying to cope with its effects. Finally in 1978, the government decided to loosen its stranglehold on the rural and town economies, and an economic boom followed. Rapid economic growth far outstripped the reduced rate of population growth, and living standards greatly increased.

But the shift away from a command economy to a market economy slowed in the late 1980s. Government control of the city economies and the elaborate system of subsidies given to urban workers were barely touched. The inflation that accompanied partial price reform was so intolerable to China's population and government that economic retrenchment was introduced to stop it. The reform decade had succeeded in part because of the greater autonomy given to individuals and families in their economic, social, and political lives, but this led to further demands for freedom that the government suppressed in 1989. Economic transformation and political liberalization came to a screeching halt, at least temporarily. China's rapid economic development of the 1980s facilitated great increases in real per capita income and the generation of enough jobs to keep ahead of the growth of population in the labor force ages. But the economic slowdown of 1989 stopped most of this progress, and many nonagricultural workers returned to farming.

Continued population growth in the 1990s will necessitate additional production of food, housing, and consumer goods, as well as more jobs. To further improve living standards will require economic growth well ahead of population growth. Short-term prospects are not promising. By the time China resolves its current drawn-out crisis of political succession, which is weakening its capacity to take bold economic initiatives, perhaps one or more Eastern European countries will have discovered how to transform an urban Communist economic structure like that in China's cities into something workable. China could then adapt whatever has worked elsewhere and resume its shift toward a market economy and its economic takeoff. Population growth will not appear such a formidable problem when that happens.

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BIRTH PLANNING BETWEEN PLAN AND MARKET: THE IMPACT OF REFORM ON CHINA'S ONE-CHILD POLICY

By Tyrene White *

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SUMMARY

Since 1979, China has officially advocated a one-child policy. Motivated by fears that excess population growth would undermine its modernization efforts, this policy was rigorously pursued in the early 1980s. Mobilization techniques honed during the Maoist era were used to enforce rural compliance, but by 1984, campaign methods were in conflict with the goals of rural reform and the changing reality of rural life. That conflict, combined with growing fears of rural instability, led to a progressive relaxation of rural policy between 1984 and 1989. By 1989, a "one-son or two-child" policy was in effect in most areas; in other words, couples whose first child was a daughter gained the right to have a second child after an interval of several years.

Although this relaxation was designed to strike a balance between state birth plans and peasant child-bearing preferences, it contributed to a rise in birth rates above planned levels. By 1988, performance had deteriorated sufficiently to generate open criticism of senior officials who had approved the relaxation, but the policy remained unchanged. The State Family Planning Commis-

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sion maintained that the problem was not the policy itself, but poor enforcement. This remained official policy through the summer of 1990, despite a more strident tone in the aftermath of Tiananmen. However, a new campaign was launched to improve rural compliance, and some localities responded with new regulations or directives.

The prospects for improved rural compliance were not good, however. The one-child policy, and China's entire birth planning strategy, was premised on the existence of the structures and processes associated with a centrally planned economy. Although those structures were eroding in rural China in the early 1980s, mobilization campaigns kept birth rates in check. In the second half of the 1980s, mobilization was replaced by routine administrative enforcement, but the conditions which facilitated enforcement during the commune era no longer existed. First, peasants enjoyed a high degree of mobility, making it possible to avoid birth planning by leaving the village permanently or temporarily. Second, cadre-peasant relations had undergone a fundamental change. Cadres no longer monopolized the sources of power and authority in the village, and the peasants no longer feared them as in the past. As a result, they were susceptible to economic retaliation and physical violence from peasants seeking to protect their family's long-term interests. Third, fiscal reforms led to a reduction in funding for birth planning work, and forced the family planning bureaucracy, like other state organs, to seek ways of generating its own revenues. The result was perverse: the bureaucracy whose mission was to prevent excess births relied on fines collected from policy violators to cover its basic operating expenses. In other words, the bureaucracy had more than the usual incentive to turn in a mediocre performance. In addition, fiscal reforms at the township and village levels left village cadres responsible for collecting the fines, but often forced them to turn the monies over to higher levels of government. This reduced incentives for cadre compliance, and made it easier and less risky to falsify reports on local birth trends than to vigorously pursue the policy.

The consequence of these developments has been to relax, but not release, the grip of the state on rural child-bearing. As the conflict between the state-planned child-bearing and market reforms has grown, however, birth planning has encountered the same problems that have plagued the economy as a whole—incentive systems are skewed in such a way as to produce "undesirable" behavior and "irrational" decisions, corruption has flourished, and scarce resources have been wasted. Whereas future leadership or regime changes may lead to more fundamental economic or political reforms, relieving the contradictions between plan and market, even the most liberal population advisors advocate a two-child limit. Although the particulars of policy may change, China is unlikely to abandon the principle of state-regulated child-bearing for a long time to come.

I. INTRODUCTION

In 1979, the leadership of the Chinese Communist Party was poised to embark on an ambitious program of reform and modernization. Although the blueprint for reform remained tentative and incomplete, three elements stood out clearly, even at that early date. First, the climate of political vigilance and mobilization that had been fostered during the previous decade had to be relaxed. Second, the grip of the centralized economic planning apparatus had to be broken; market incentives were needed to supplement and rationalize the bureaucratic allocation process, and to stimulate economic growth. And third, because excessive population growth threatened to stall or negate economic progress, child-bearing had to be subjected to tight planning and control; only one child per couple could be allowed.

Although the relaxation of political and economic controls signalled a change in state policy, the decision to tighten child-bearing controls built on a longstanding policy record. In 1962, the leadership of the Chinese Communist Party asserted the primacy of the state over individual child-bearing decisions and justified intervention on economic grounds.[1] They embraced the principle of "birth planning" (*jihua shengyu*) as well as birth control (*jiezhi shengyu*), and shortly thereafter began to draft short- and long-term targets for population growth.[2] Although generally translated as "family planning" or "planned parenthood," the Chinese concept of *jihua shengyu* is broader than the former terms. Like family planning, birth planning implies conscious household-level decision-making regarding the number and spacing of children, but it also refers to a process of comprehensive state planning and regulation of child-bearing trends. If human reproduction could be regulated in a predictable fashion, it was believed, state plans for economic growth, employment, social services, and food supplies (to cite only a few examples) would be easier to develop and implement.[3]

In practice, the regulation of child-bearing was pursued by subjecting population growth to the same principles of centralized administration that applied to material production. By the early 1970s, annual and five-year targets for population growth were disseminated from the center to the localities along with targets for steel and grain production; party committees and local governments were instructed to make birth planning work a part of their routine, and to create the appropriate mechanisms for bureaucratic oversight. State policy on child-bearing converged on a two-child ideal, and programs that supported pro-natalist tendencies were repealed.[4]

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[1] An abbreviated text of the 1962 directive, "Zhonggong zhongyang, guowuyuan guanyu renzhen tichang jihua shengyude zhishi" (Central Committee and State Council instructions on enthusiastically promoting planned birth), can be found in Chinese Academy of Social Sciences Population Research Center, *Zhongguo renkou nianjian, 1985* (1985 Population yearbook of China) (Beijing: Zhongguo shehui kexue chubanshe, 1986), p. 14.

[2] As early as 1965, for example, Zhou Enlai set a goal of reducing the rate of population growth to one percent or lower before the end of the twentieth century. Zhou Enlai, "Nongcun weisheng gongzuo he jihua shengyu wenti" (Rural health work and family planning), in *Zhongguo renkou nianjian, 1985*, p. 15.

[3] See, for example, Mao Zedong's discussion of birth planning and economic planning in his speech, "On the Correct Handling of Contradictions Among the People (Speaking Notes)," in Roderick MacFarquhar, Timothy Cheek, and Eugene Wu, eds., *The Secret Speeches of Chairman Mao: From the Hundred Flowers to the Great Leap Forward* (Cambridge, Ma: Council on East Asian Studies, Harvard University, 1989), pp. 159-161.

[4] Li Honggui, "Zhongguode renkou zhengce," in *Zhongguo renkou nianjian, 1985*, pp. 217-218.

The one-child policy of the 1980s was the direct outgrowth of this historical approach to fertility reduction—an approach designed specifically for a centrally planned economy. Just as the policy was inaugurated in 1979, however, economic reforms began to chip away at the structures and processes associated with centralized economic planning, and the state relaxed its extreme political grip on private behavior. These changes were most evident in the countryside in the early 1980s, where agricultural decollectivization and decommunization gave the peasantry some measure of economic power and deflated cadre authority. The result was a rapid improvement in rural economic performance, but the enforcement of rural birth limits had never been more difficult.

To enforce a one-child policy during this period of political and economic transition, the state relied on campaign methods that had been a mainstay of the Maoist regime. The campaigns mobilized reluctant cadres to enforce the unpopular regulation, and outside work teams that were sent into villages brought tremendous pressures to bear on rural couples.[5] These pressures reached their peak in 1983, when a massive sterilization campaign targeted all couples under forty with two or more children. The result was a four-fold increase in the number of sterilizations and vasectomies in 1983, as compared with the preceding year, along with a marked increase in the number of IUD insertions and abortions.[6] Within a year, however, the intensity of the campaign had triggered a backlash, and central policy on rural child-bearing limits began to loosen.[7] Despite the search for a satisfactory balance between the competing imperatives of market-oriented reform and birth planning, however, the gap between official goals and rural performance widened steadily in the second half of the 1980s.

II. THE POLITICAL ECONOMY OF BIRTH PLANNING POLICY, 1984–1990

A. THE SIGNIFICANCE OF CENTRAL DOCUMENT 7 (1984)

In the spring of 1984 a new central document on birth planning was issued by the Central Committee and State Council. Consisting of a report by the party group within the State Family Planning

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[5] Those pressures ranged from economic and political threats to physical coercion. See John S. Aird, "Coercion in Family Planning: Causes, Methods, and Consequences," in U.S. Congress, Joint Economic Committee, *China's Economy Looks Toward the Year 2000, Volume 1: the Four Modernizations* (Washington: U.S. GPO, 1986), pp. 184–221. Campaigns that were effective in the short-run, however, could not prevent young couples from eventually having a second child, or in some cases, a third.

[6] Karen Hardee-Cleaveland and Judith Banister, "Fertility Policy and Implementation in China, 1986–1988," in *Population and Development Review* 14, No. 2 (June 1988), p. 276; Robert Delfs, "The Fertility Factor, " *Far Eastern Economic Review*, July 19, 1990, p. 19.

[7] Apparently, the backlash was experienced at the central level in part through a large volume of letters "inquiring" about the campaign or complaining about implementation methods. In a 1986 document on family planning (discussed below), one passage documents the improvement in cadre work methods by noting that the number of letters from the "masses" had declined by 75 percent between 1983, the peak year, and 1985. For the text of Central Document 13 (1986), entitled "Guanyu 'liuwu' qijian jihua shengyu gongzuo qingkuang he 'qiwu' qijian gongzuo yijiande baogao" (Report on the state of birth planning work during the sixth five-year plan period and opinions on work during the seventh five-year plan period), see Guojia jihua shengyu weiyuanhui xuanzhuan jiaoyu si, Zhonggong zhongyang dangxiao jihua shengyu weiyuanhui, *Shiyizhou sanzhong quanhui yilai jihua shengyu zhongyao wenjian xuanbian* (Propaganda and Education Office of the State Family Planning Commission, Central Party School Family Planning Commission, *Selected Important Documents on Birth Planning since the Third Plenum of the Eleventh Central Committee*), Zhonggong zhongyang dangxiao chubanshe (Central Party School Publishers), 1989, pp. 27–35.

Commission (SFPC) and a statement of concurrence by the Central Committee, the document made clear that strict birth limits would continue to be enforced. At the same time, however, the need for rural political stability was stressed; methods that provoked a serious peasant backlash and endangered their enthusiasm for reform were to be modified in a way that would make them "acceptable to the peasants." [8] More specifically, the document signalled a shift in policy in four important respects.

1. Coercion.

The SFPC report admitted that coercion was a serious problem in the implementation of birth planning work. In keeping with the tenor of the central-level party rectification campaign that had been launched in October 1983, the party group took the blame for problems with "coercion and commandism," admitting that they had not paid enough attention to their "work style" or adopted "remedial measures." [9] They also admitted that the demands made on localities in the implementation of the sterilization campaign in 1983 were too severe, and that the problems began at the top:

> In those places where coercion exists, and no immediate solution has been found, the main responsibility is ours. We believed that because birth planning work tasks are heavy, the appearance of coercion was unavoidable.[10]

With regard to future work, cadres were instructed to avoid rigid and uniform implementation, or "one cut of the knife" (*yidaoqie*). Births outside the plan were to be "resolutely checked," but handling the problem "simplistically" was deemed unacceptable. Sterilization was still to be "promoted" on the "principle of voluntarism," but lower levels were not to be pressured with unrealistically high targets. In short, cadres were exhorted to continue to take birth planning and birth targets seriously. At the same time, they were reminded that birth planning work consisted of more than the periodic use of administrative pressure and compulsion, and they were urged to invest in a more comprehensive approach to the problem.

2. Allowances for second births.

Central Document 7 also marked a turn in policy by increasing the proportion of households that would be allotted a second child. In 1982, the quota for second births had been limited to "under five percent" of all couples; in 1984, the quota was expanded to "about ten percent." [11] On its own, this small increase was little more than a cosmetic adjustment to the one-child limit, one much too small to address peasant grievances. The document went further, however. It stated that additional concessions would be made as the rate of forbidden "multiple births" (*duotai*) declined, a policy that became known as "opening a small hole to close a large hole"

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[8] Central Document 7 (1984) is entitled "Guanyu jihua shengyu gongzuo qingkuangde huibao" (Report on the situation in birth planning work). The text may be found in *Jihua shengyu zhongyao wenjian* (Selected important documents on birth planning), pp. 15-25.

[9] Ibid., pp. 18-23.

[10] Ibid., p. 22.

[11] Ibid., p. 20.

(i.e., increasing allotments for a second birth in order to reduce the number of third or higher parity births).[12] This provision opened the door to further relaxations of the one-child limit after 1984, including experiments in some localities with a rural two-child policy.

3. The primacy of rural reform.

In a provision regarding economic penalties for policy violators, the document made clear that family planning was not to take precedence over the requirements for rural reform and development. It explicitly prohibited "infringing upon or destroying the masses' basic means of production or basic means of subsistence" in order to invoke penalties.[13] This new insistence that the implementation of family planning not interfere directly with peasant livelihood or economic production echoed the thrust of another policy document—Central Document 1 (1984). This document, one in a series of crucial agricultural reform documents in the early 1980s, included two elements that had a direct bearing on the implementation of birth planning in the countryside.[14] First, the document called for fifteen year leases on agricultural land; the long-term leases were designed to increase peasant security in their land-holding contracts and encourage investment in agricultural growth. From the perspective of family planning, however, long-term leases made it more difficult to reward one-child couples with extra land allotments. In areas where cadres continued to recognize the land-holding benefit in principle, they were reluctant to enforce it without explicit orders to do so.[15] In other areas, the emphasis on stability and agricultural growth forced changes in birth planning regulations that eliminated the landholding benefit.[16]

Second, to boost peasant enthusiasm and reduce their tax burden, the document called for a reform of township-level finances. Family planning was one of several "government-subsidized projects" specifically targeted for reform; the goal was to reduce excessive expenditures like those incurred in the 1983 sterilization campaign,[17] and to place more of the funding burden on local governments. This reform signalled localities that economic growth took precedence over other central directives. Family planning, however heavily it was stressed in Beijing, could not be allowed to absorb revenues that might otherwise be invested profitably.[18]

4. The relationship between modernization and fertility levels.

The document stressed the "modernization first" theme by inverting the standard argument on the relationship between economic development and birth planning. Over the previous five years, propaganda on the one-child policy had stressed that China's modernization effort was dependent on induced fertility control. Without strict birth limits, it was argued, China's development gains would be largely offset by increases in population. In Central Document 7, however, a more complex relationship was implied. The text stated that "high birth rates are a reflection of economic and cultural backwardness," and that "the reasons why the masses demand additional births are many-faceted." [19] This tentative acknowledgement that a decline in fertility levels in the countryside might *result* from the process of development, not *fuel* it, paved the way for a relaxation of rural birth limits during the second half of the 1980s.

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[12] Ibid., p. 20.

[13] Ibid., p. 21.

[14] For the translated text of the document, see *China Quarterly* 101 (March 1985), pp. 132–142.

[15] Interview with former township-level birth planning official, July 1990.

[16] Susan Greenhalgh, *The Evolution of the One-Child Policy in Shaanxi Province, 1979–1988*, Working Paper No. 5 (New York: The Population Council, 1989), p. 37.

[17] In Wuhan municipality, for example, the 1983 annual budget for birth planning was 600,000 *yuan*, but one million *yuan* was spent on the sterilization campaign alone. Interview with municipal family planning officials, June 1984.

[18] The consequences of this reform are discussed fully in section III, part C, of this paper.

B. BIRTH PLANNING POLICY DURING THE SEVENTH FIVE-YEAR PLAN, 1986–1990

1. *Policy relaxation and plan goals.*

Although the one-child limit was strictly implemented in urban areas throughout the 1980s, after 1984 the policy was progressively relaxed in rural areas. The allowance for a second birth in the countryside was increased from "about ten percent" of all single-child households in 1984 to twenty percent in 1985. In 1986, the first year of the Seventh Five-Year Plan (FYP) period, the quota was raised to fifty percent, and an important new category became eligible for a second child—single-daughter households (*dunu hu*).[20] Over the next few years, provinces were given substantial leeway to determine when and where to implement the provisions for allowing a second birth, including the newly added category. By 1988, fourteen provinces and autonomous regions had declared rural single-daughter households to be eligible for a second child, while six other provinces and municipalities did not.[21] In May 1988, however, the SFPC declared that it was national policy to grant a second child to single-daughter households; localities wishing to implement a more restrictive policy had to apply to the SFPC for approval.[22] By mid-1989, four policy categories had emerged: 1) a two-child policy, operative in six provinces and autonomous regions (Guangdong, Hainan, Yunnan, Ningxia, Qinghai, and Xinjiang); 2) a "one-son or two-child" policy, operative in eighteen provinces, plus less developed areas in Jiangsu and Sichuan; 3) a policy of limited concessions for second births, operative in Beijing, Tianjin, Shanghai, and most rural areas in Jiangsu and Sichuan; 4) a policy of two or more births per couple, operative among minority nationalities.[23]

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[19] "Guanyu jihua shengyu gongzuo," p. 21.

[20] The new provision was a concession to peasant preferences for son, but those couples who gave birth to a second daughter were not allowed a third child. Hu Angang, "Zhongguo renkou shikongde yuanyin ji duice" (Reasons and Countermeasures for China's Runaway Population) *Liaowang Zhoubao haiwaiban* (Outlook overseas edition) 10 (March 6, 1989), pp. 17–18. A second source sets the 1986 quota for second births at sixty percent of rural single-child households. See Wang Yan, Liu Jinghuai, Zhao Derun, Ouyang Huijun, Fang Jinyu, "Renkou wenti yao zhuajin zai zhuajin" (Population problems must be grasped more and more firmly), *Liaowang* 28, July 13, 1987, p. 14.

[21] Hu, "Zhongguo renkou shikongde yuanyin," p. 51.

[22] Peng Peiyun, "Zai quanguo jihua shengyu weiyuanhui zhuren huiyi bimushide jianghua" (Speech at the close of the national meeting of directors of family planning commissions),in *Jihua shengyu zhongyao wenjian*, pp. 108–120; Zeng Yi, "Family Planning Program 'Tightening Up'?" *Population and Development Review* 2 (June 1989), p. 335.

The relaxation and decentralization of birth planning policy after 1986 reflected a subtle shift in central priorities. In contrast to the Sixth FYP, emphasis on family planning was distinctly downgraded in the Seventh. In the Sixth FYP, birth planning and population growth were discussed in conjunction with raising incomes and living standards; their importance to the overall modernization process was heavily stressed. In the Seventh FYP and Zhao's explanatory work report, however, they are relegated to the category of "other social programmes," a catch-all category at the end of a list of economic priorities. Similarly, Zhao's speech to the 13th Party Congress in October 1987 grouped birth planning with environmental protection as a serious social issue—one that required political commitment but commanded few resources.[24] In addition, China's official population target for the year 2000 was revised; the original goal of holding population "under 1.2 billion" was changed to "about 1.2 billion," a change soon understood to mean 1.25 billion.[25]

Despite the more moderate tone, the goals set forth in the Seventh FYP remained extremely ambitious. The primary target was set forth in a new directive on family planning; Central Document 13 (1986) called for an average annual rate of population growth of "about 12.5 per thousand." [26] This translated into a total population target of 1.113 billion by 1990, and both targets were registered in the final draft of the Seventh FYP. By 1988, however, it became clear that the population would exceed the target by a substantial margin, and a different kind of backlash began to occur.

2. Hardline offensive and open debate.

As early as 1984, a heated debate over the one-child limit broke out among social scientists and policy advisers in China. Some experts urged a change in rural policy to allow two children per couple.[27] Others, however, voiced their opposition to any relaxation of the one-child limit; they believed that the combination of policy instability and rural concessions would encourage child-bearing beyond the official limits.[28] When rising birth rates in 1986 and 1987 confirmed their worst fears, these critics were quick to respond. In a series of newspaper articles and other publications, they complained about the "human wave" that was "washing over China," and attributed it directly to the negligence of policymakers.[29] They argued that it was a serious mistake to loosen rural restrictions on a second birth, and complained that the interference of a few officials had led to the crisis. To stem the flood, at least one author openly advocated the use of coercion to overcome the resistance of the peasantry.[30]

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[23] Zeng, ibid., p. 335.

[24] For the text of the Seventh Five-Year Plan and Zhao's report, see *Beijing Review* 16 (1986). For the reference to family planning in Zhao's speech at the 13th Party Congress, see Zhao Ziyang, "Advance Along the Road of Socialism with Chinese Characteristics," *Beijing Review* (November 9–15, 1987): X.

[25] The relaxation of the 1.2 billion figure apparently originated in July 1984, when a report was submitted to the Central Committee entitled, "Some Questions On Population Control and Population Policy" (Renkou kongzhi yu renkou zhengce zhong ruogan wenti), in Ma Bin, *Lun Zhongguo renkou wenti* (Discussion of China's Population Problem), Zhongguo guoji guangbo chubanshe (China international broadcast publishers) (Beijing: 1987), p. 2. Subsequently, Wang Wei, then head of the SFPC, used the new formulation of "about 1.2 billion" in a speech at the Central Party School in November 1985. See Wang Wei, "Zai 'Qiwu' qijian ba jihua shengyu gongzuo zhuade geng jin geng hao" (Grasp birth planning work more firmly and better during the seventh five-year plan period), in *Jihua shengyu zhongyao wenjian*, p. 68.

[26] For the text of Central Document 13, see *Jihua shengyu zhongyao wenjian xuanbian*, pp. 27–35.

[27] Peng Peiyun, "Zai quanguo jihua shengyu weiyuanhui," p. 113. Although this alternative has never been accepted by the Chinese government, its popularity among Chinese scholars was fueled by a 1985 article by John Bongaarts and Susan Greenhalgh entitled, "An Alternative to the One-Child Policy in China," *Population and Development Review* 11, No. 4 (December 1985), pp. 585–617. For a discussion of its influence and the diverse views held within the community of Chinese scholars, see Susan Greenhalgh, "Population Studies in China: Privileged Past, Anxious Future," *The Australian Journal of Chinese Affairs* 24 (July 1990), pp. 357–384.

These open criticisms prompted a rebuttal from Peng Peiyun, Wang Wei's successor as head of the SFPC. In 1988, she and other senior officials insisted that the policy relaxation had not been a mistake; instead, they argued that rising birth rates were a function of 1) an increase in the child-bearing age cohort, and 2) poor implementation of policy in some areas.[31] In taking this position, they were backed by the authority of the Standing Committee of the Politburo, which had met the previous March to discuss family planning. The Standing Committee members reaffirmed the existing policy on birth limits, arguing that the policy of allowing single-daughter households to have a second child 1) facilitated rural implementation, 2) prevented female infanticide, 3) generated a positive international reaction, and 4) contributed to the realization of population control targets by reducing the number of third births.[32]

This high-level commitment to the "existing policy" was reiterated in 1989 and 1990. To mark China's arrival at the 1.1 billion population mark in April 1989, a *Renmin Ribao* editorial stressed that the "key" to family planning work was to implement the "existing" policy "100 percent," implicitly rejecting calls for a tightening of policy.[33] Despite a reactionary speech by Jiang Zemin in October 1989, after the Tiananmen crackdown, this remained the basic policy line through the summer of 1990.[34] In February 1990, Jiang Zemin and Li Peng stressed the need to implement "existing policy" in a letter to the national meeting of family planning directors.[35] And in July 1990, Li Ruihuan reiterated the importance of "adhering to the established family planning policies."[36]

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[28] Wang Wei, "Zai 'qiwu' qijian," p. 69.

[29] Xie Zhenjiang, "There is No Route of Retreat," *Jingji Ribao*, January 24, 1989, p. 3, in *FBIS*, February 15, 1989, pp. 35–37; Liu Jingzhi, "Experts Concerned Are Not Optimistic About China's Population Situation, and Think That Interference by Officials is an Important Reason Why Birth Rate Has Risen Again," *Guangming Ribao*, March 6, 1988, p. 2, in *FBIS*, March 6, 1988, pp. 14–15.

[30] Xie, "No Route of Retreat," p. 37.

[31] *China Daily*, April 19, 1988, p. 1; see also Peng, "Zai quanguo jihua shengyu weiyuanhui," pp. 108–120.

[32] Peng, ibid., p. 112.

[33] *Renmin Ribao*, April 14, 1989, p. 1. See also, Peng Peiyun, "Controlling Population Enriches the Nation and Makes People Strong," *Liaowang* 1 (January 1, 1990), in *FBIS*, April 24, 1990, p. 53.

[34] According to a report in by Tammy Tan in the *Hongkong Standard*, (October 16, 1989, p. 6), Peng Peiyun read a speech by Jiang at a national symposium in Hangzhou. In it, he reportedly attributed Western criticism of China's birth planning policy to the belief of international businessmen that a larger population would mean higher profits. *FBIS*, October 20, 1989, p. 26–27.

[35] *Zhongguo renkou bao*, February 16, 1990, p. 1.

[36] He was speaking to a forum of advanced family planning workers. *Xinhua*, July 4, 1990, in *FBIS*, July 27, 1990, pp. 14–16.

Nevertheless, anxieties about population growth became more pronounced in 1989 and 1990. They were fueled by the results of a 1988 sample survey that revealed a 1987 population growth rate of 16.16 per thousand, nearly two percentage points higher than the officially reported rate of 14.39 per thousand.[37] This figure raised doubts about China's ability to meet the targets set forth in the Seventh FYP, as well as the long-range target of about 1.25 billion. As a result, in late 1988 the target was revised upward to 1.27 billion. By early 1990, however, even this figure appeared optimistic; China's total population at the end of 1989 exceeded the Seventh FYP target figure for 1990, adding fuel to the hardline argument for tighter child-bearing limits.[38] Rather than change official policy, however, a new campaign was launched to improve performance under the existing policy. Some provinces issued new regulations or special directives, and expert advisors proposed new measures to improve rural performance.[39] The question, however, was whether any set of measures would significantly improve rural enforcement.

II. Market Reform versus Birth Planning: Impediments to Rural Implementation

When the one-child policy was announced by state officials in 1979, it was premised on three assumptions. The first assumption was that governmental regulation of child-bearing decisions was a necessary and valid exercise of state power. Second, it assumed that birth planning would be subsumed within the process of centralized economic planning; population figures and birth targets could be disaggregated and assigned to localities in the same way that economic targets were assigned. Third, it assumed that an effective system of social and political control was in place—one that restricted population movement, facilitated ideological indoctrination, and imposed behavioral norms. A decade later, the state continued to assert the right to set strict child-bearing limits, but the context for implementation had undergone dramatic change, especially in the countryside. The political and economic controls associated with centralized economic planning were significantly weakened, while partial market reforms created irrational reward structures that worked against the state's anti-natal goals. In that context, the gap between state birth plans and grassroots performance began to widen.[40]

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[37] *Renmin Ribao*, October 28, 1988, p. 3. The survey was conducted jointly by the SFPC, the State Statistical Bureau, the State Planning Commission, the Ministry of Finance, and the Public Security Bureau.

[38] Shih Chun-yu, "NPC Deputies Say the Population Problem is Serious," *Ta Kung Bao*, April 3, 1990, p. 2, in *FBIS*, April 9, 1990, p. 34.

[39] Henan province approved a law on family planning in April 1990. *Henan ribao*, May 10, 1990, p. 9, in *FBIS*, June 1, 1990, pp.36–42. Fujian province issued a party and government directive to shore up implementation of the existing regulations. *Fujian ribao*, March 25, 1990, p. 4, in *FBIS*, May 11, 1990, pp. 42–45. On new measures for enforcement, see *Zhongguo tongxun she*, July 21, 1990, in *FBIS*, July 23, 1990, p. 31.

[40] The declining reliability of the statistical reporting system made it difficult to estimate the precise extent of the problem. The national census that was conducted on July 1, 1990, may help to clarify China's demographic standing as it moves into the last decade of the twentieth century. The census results were not available at the time this article was written, however.

A. PEASANT MOBILITY

During the Maoist era, a tight network of controls over mobility and food supply kept peasant laborers tied closely to the villages. The lack of mobility facilitated close surveillance of child-bearing age couples, and pressures to conform were extremely difficult to resist. To encourage the development and commercialization of the rural economy, restrictions on peasant movement were progressively relaxed during the 1980s. Large numbers began to move into urban areas as private entrepreneurs or temporary workers; others simply moved out of their native villages to nearby towns and small cities. By 1990, it was estimated that this "floating population" numbered more than 20 million.[41]

The increase in peasant mobility vastly complicated the job of enforcing even a two-child limit. Once rural couples moved beyond the jurisdiction of their native village or township, local authorities had neither the ability or the incentive to monitor pregnancy and child-bearing. In towns and cities where migrant laborers congregated, however, local family planning organs were also unable to control their behavior. In some areas, the bureaucracy simply did not have the personnel or economic means to deal with the logistical problems posed by a scattered migrant population; in others their work was thwarted by powerful employers anxious to retain cheap peasant labor. The result was the growth of an "excess birth guerrilla corps" that produced a large "illegal" population.[42]

To counter this problem, the state proposed to substitute indirect regulation for direct administrative control. Beginning in 1987, local branches of the state bureaucracy for commerce and industry were instructed to withhold work permits from individuals who violated the birth limitation policy. Peasants were required to present proof of compliance, and local bureaus were forbidden to issue work papers without this evidence.[43] These procedures were easily skirted, however. Local commerce and industry officials had no interest in becoming adjunct family planning officials, and as the number of migrants increased, fewer and fewer bothered to register locally or acquire the obligatory work permit.[44] By 1990, certain localities had gained a reputation for being safe havens from family planning enforcement.[45]

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[41] *Xinhua*, June 15, 1990, in *FBIS*, June 18, 1990, p. 37; Zhang Mengyi, "A New Mode of Population Shift and Mobility in China," *Liaowang Overseas Edition* 2 (January 8, 1990), pp. 16–17, in *FBIS*, February 9, 1990, pp. 18–20.

[42] Guo Xiao, "The 'Population Explosion' is Drawing Near," *Jingji ribao* (Economic daily), January 10, 1989, in *FBIS*, February 3, 1989, p. 51; Fan Xiangguo and Huang Yuan, "Zhongguo 'hei renkou'" (China's illegal population), *Xin guancha* (New Observer) 4 (February 25, 1989, pp. 28–32; Report, "Couples with more than One Child Seek Shelter Along Borders of Hunan, Hubei, Sichuan, and Guizhou," *Zhongguo tongxun she* (January 20, 1989), in *JPRS-CAR* 89–014, February 15, 1989, pp. 44–45.

[43] De Ming, "China's Population Situation Remains Grim," *Liaowang Overseas Edition* 17 (April 1988), pp. 9–10, in *FBIS*, May 11, 1988, p. 28.

[44] Those who did were more likely to have used corruption and bribery to acquire the necessary certificates. Pei Gang, "Thoughts on the Present Disarray in Matters of Population Reproduction and Suggested Improvements," *Renkou yu jingji* (Population and economics) 5 (October 25, 1990), pp. 6–10, in *JPRS-CAR* 90–010, February 7, 1990, p. 65.

[45] Report, "Couples with more than One Child Seek Shelter," pp. 44–45.

B. CADRE-PEASANT RELATIONS

A second dilemma for rural enforcement was the changing political climate within the villages. In some localities, powerful village leaders were still able to rule with an iron fist; in others, however, political and economic reforms forced village leaders to be far more circumspect in the exercise of power.

Unlike the commune era, village leaders no longer had a complete monopoly over economic resources or opportunities; neither could they count on an unlimited tenure in office. As a result, policies that provoked peasant opposition (e.g., enforcing birth limits or extracting state and local taxes) were handled with caution, and for good reason. Peasant retaliation or aggressive resistance was a real possibility, and "incidents of revenge" ranged from destruction of cadre property to physical attack.[46] Moreover, village leaders were far more vulnerable to peasant retaliation than were their township superiors; they rarely moved on to higher-level posts outside the village, and they no longer had guaranteed tenure in office. As a result, they and their families had to live with the legacy of their political tenure, in a post-reform social environment where household size and community status were closely linked. Families who saw child-bearing as their best long-term guarantee of strength, respect and stature (and their best defense against weakness, bullying and abuse by powerful families), believed that birth limits represented a profound threat to their existence within the village. Some were prepared to take any steps necessary, including the use of force, to protect that future, and cadres were hesitant to stand in their way.[47]

C. FISCAL REFORM AND FAMILY PLANNING FUNDING

Though rarely discussed in the context of China's family planning efforts, fiscal reforms implemented since 1984 have had a tremendous impact on the program. The fiscal reforms encouraged financial neglect of family planning at the village and township levels, and contributed to a chronic shortage of funding for family planning work.

Until 1984, the costs of contraceptives and all family planning-related medical procedures (IUD insertions, abortions, sterilizations, etc.) were covered within the central state budget. All other expenses (e.g., costs of preparing and disseminating propaganda materials, work subsidies for village cadres and activists involved in mobilization campaigns) were absorbed by local governments or rural villages, whether or not they exceeded budgeted expenditures. In 1984, however, Beijing mandated a reorganization of township-level finances; family planning was one of several categories of local expenses targeted for reduction and rationalization.[48]

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[46] Su Suining, "There are Many Causes of strained Relations Between Cadres and Masses in Rural Areas," *Nongmin ribao* (Peasant daily), September 26, 1988, p. 1, in *FBIS*, October 7, 1988, p. 13; Fan and Huang, "Zhongguo 'hei' renkou," p. 71.

[47] Yang, "Woguo nongcun jihua shengyu gongzuo zhong xuyao yanjiu jiejuede jige wenti" (Several issues in need of resolution in our country's rural birth planning work), *Renkou yanjiu* (Population research) 6 (1989),pp. 62–64; Pei, "Thoughts on the Present Disarray," p. 65.

[48] See footnote 14.

The impetus for fiscal reform was two-fold. First, central authorities sought to reduce the level of "peasant burdens" (*nongmin fudan*), i.e., the sum of all direct and indirect forms of taxation. Still uncertain in late 1983 how rapidly agricultural performance would improve, they feared that licit and illicit extractions by local cadres could stifle peasant entrepreneurship and impede the reform process.[49] Second, the reform of local government expenditures was part of a larger effort to reduce central-level budgetary commitments and decentralize fiscal authority. By 1984, new revenue-sharing arrangements had been negotiated with individual provinces. As a result, provincial governments gained control over the structure of local spending, and the right to determine their own fiscal arrangements with local governments under their jurisdiction.[50] In turn, counties eventually gained the right to set fiscal arrangements with township governments, placing all levels of government on "harder" budgetary constraints.[51]

This comprehensive reform of the fiscal system had far-reaching implications for the overall pattern of government spending and investment, and for specific budgetary categories like family planning. As governments gained greater control over their budgetary revenues, governmental bureaus and commercial enterprises were pressured to balance their budgets and generate their own sources of revenue for reinvestment or expansion. As more responsibilities were transferred from the central budget to local authorities, therefore, the solvency of local governments came to depend on their entrepreneurial abilities. Government activities that did not generate a profit were often neglected, while profit-making ventures attracted more investment.[52] Agencies that could not compete on the market were starved for funds, and came under increased pressure to find their own sources of revenue simply to maintain their existing operations.[53]

In that climate, the family planning bureaucracy found itself strapped for funds during the Seventh FYP, just as the pressures of an increasing child-bearing age cohort demanded increased investment. In late 1986, SFPC director Wang Wei complained that funding for family planning had dropped off after 1983; he criticized

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[49] On the problem of "peasant burdens," see Tyrene White, "Below Bureaucracy: The Burden of Being a Village Under the Local State," paper presented at the Annual Meeting of the Association for Asian Studies, Chicago, Illinois, April 6–8, 1990.

[50] James Tong, "Fiscal Reform, Elite Turnover and Central-Provincial Relations in Post-Mao China," *Australian Journal of Chinese Affairs* 22 (July 1989), pp. 13–14.

[51] The arrangements that provincial governments and prefectural governments, between prefectures and counties, and between counties and townships, can and do vary from one locality and the next. This had created an exceedingly complex set of financial arrangements at the local levels. See, for example, "Hebei sheng renmin zhengfu guanyu gaijin caizheng guanli tizhide jixiang guiding" (Some regulations of the Hebei provincial government concerning improving the financial management system), *Hebei jingji tongji nianjian, 1987* (Hebei economic statistical yearbook, 1987), p. 488; Zhonggong hebei shengwei yanjiushi nongcunchu, "Fangshou rang xiang zhengfu dang jiali cai" (Let go and allow township governments to set up their own finances), *Nongcun gongzuo tongxun* (Rural work bulletin) 6 (1986), pp. 32–33. On the distinction between "hard" and "soft" budget constraints, see Janos Kornai, *Contradictions and Dilemmas: Studies on the Socialist Economy and Society* (Cambridge, Ma: MIT Press, 1986).

[52] On the role of township governments in developing profit-making township enterprises, see Jean C. Oi, "Economic Management and Rural Government: Bureaucratic Entrepreneurship in Local Economies," paper presented at the Annual Meeting of the Association for Asian Studies, Chicago, Illinois, April 6–8, 1990.

[53] Christine Wong, "Tax Reform and Central-Local Fiscal Interaction in China," paper presented at the East Asia Colloquia Series, Fairbank Center for East Asian Research, Harvard University, July 1990; White, "Below Bureaucracy."

"some provinces" for drastically reducing their allocation for family planning, and called on them to give priority to family planning in future budgets.[54] By 1988, delegates to the annual meeting of family planning commission directors were pressing central leaders for increased funding and personnel. Premier Li Peng's response, however, was to remind them of the "financial difficulties" with the central budget and request that local governments carry even more of the financial burden for family planning.[55] This left family planning officials to complain publicly about the lack of support at all levels of government. One provincial FPC director was quoted as saying: "During the past few years, we spent half our time lobbying government leaders at all levels. They should take the lead in family planning, but we end up having to push them into action." [56]

The lack of funds to maintain and develop the family planning bureaucracy had serious and paradoxical consequences for rural enforcement. First, family planning work was slowed in some areas due to lack of funding for medical support. In areas where the family planning organization sought to establish medical facilities independent of local hospitals, no funds were available to expand meager facilities.[57] In other areas, local governments did not reimburse hospitals for the cost of sterilization surgeries or other procedures; as a result, the hospitals refused to accept additional family planning patients until the debt was paid.[58] One report claimed that "many" provincial governments owed public health departments "up to 10 million yuan" in tubal ligation surgery fees. To place this sum in relative perspective, one family planning director pointed out that 100 million *yuan* had been spent to renovate the hotel where a family planning meeting had been held. He added, "How come funds just dry up when it comes to family planning?" [59]

Second, the family planning bureaucracy came to rely upon the extraction of fines from policy violators in order to cover ordinary operating costs; *to pursue its bureaucratic mission of preventing excess births, the bureaucracy needed the monies collected as a result of excess births.* In one Sichuan county, for example, the gap between budgeted allocations and actual expenditures during the 1979–1987 period was 606,000 *yuan* annually. To cover the deficit, the county relied on the collection of excess birth fees, making it bureaucratically imperative that couples violate the birth limitation policy.[60] Conversely, counties that were very successful in preventing excess births soon recognized the benefit of turning in a more mediocre performance.[61]

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[54] Wang Wei, "Jihua shengyu gongzuo qingkuang" (Situation in family planning work), *Jihua shengyu zhongyao wenjian*, p. 100.

[55] Li Peng, "Zai tingchu quanguo jihua shengyu weiyuanhui zhuren huiyi huibao shide jianghua" (Talk while listening to the report of the national meeting of directors of family planning commissions), *Jihua shengyu zhongyao wenjian*, p. 62.

[56] Zhu Li, "Family Planning to Emphasize Economic as Well as Administrative Methods," *Jingji Cankao* (Economic Reference), March 10, 1989, p. 4, in *JPRS* 89-047, May 17, 1989, p. 39.

[57] Cheng Linli and Wu Yousheng, "Jiceng jihua shengyu gongzuode fancha xiaoyi yu sikao" (Contrasting effects of basic-level family planning work and reflections), *Renkou yanjiu* 6 (1989), p. 53.

[58] Cheng and Wu, "Jiceng jihua shengyu," p. 53.

[59] Zhu, "Family Planning," p. 39.

[60] Cheng and Wu, "Jiceng jihua shengyu," pp. 53–54.

Despite the economic incentive to allow excess child-bearing, however, mobilizational pressures to comply with the one-or-two child limit did not cease. Instead, campaigns—presumably the antithesis of routine bureaucratic process—became an essential component of routine bureaucratic process, and targets for fine collections were issued alongside targets for births, sterilizations, and abortions.[62] In one prefecture, campaigns of this type were held three times a year on a regular basis. The collection of fines was one of six key targets issued to each locality.[63] The collection of fines by no means guaranteed that the money would be used to reward one-child couples or provide better family planning services, however. Township and village leaders sometimes took advantage of murky accounting procedures at the grassroots to divert the funds to other projects.[64]

Third, fiscal reforms and fiscal austerity contributed indirectly to the deteriorating quality of China's population statistics. Despite the pressures on grassroots cadres to collect fines, monies raised at the village level were often turned over to higher levels of government. In one Sichuan county, for example, township governments received 70 percent of all monies collected as fines, the district (*qu*) received 5 percent, the county received 20 percent, and the prefecture received 5 percent.[65] Elsewhere, villages were allowed to retain a portion of the fees, but sometimes as little as 20 percent.[66] This arrangement denied village cadres the fruits of their own labors, and reinforced their distaste for family planning work.[67] Since village leaders were required to undertake the difficult and dangerous job of extracting the levies, but not necessarily allowed to retain them, they had no incentive to accurately report local birth trends.[68]

By the end of the decade, the erosion of the statistical reporting system was one of the most serious issues on the family planning agenda. The statistical "leakage" (*shuifen*), or exaggeration, begins at the village level, where grassroots reports lay the foundation for nationwide compilations of population trends.[69] Since those reports can only be verified by village cadres who are intimately familiar with village households, the reporting system has always been susceptible to fraud and human error. Since 1985, however, the costs of accurate reporting have grown, while the risks of falsification have declined. As a result, fraud and misreporting have spread to all levels of the system, and political leaders enjoying recognition for their "advanced" family planning work have no incentive to question positive reports from subordinates who are anxious to please.[70] Similarly, enthusiastic family planning cadres who uncover statistical errors feel strong pressures to cover them up. As one former cadre put it, an honest report from one township would accomplish nothing but the destruction of one's own career, since higher-level political leaders would be embarrassed and angered by the revelation.[71]

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[61] Cheng yicai, "Chaosheng zinufei guanli tanwei" (Inquiry into the management of excess birth fines) *Renkou yanjiu* (Population research) 4 (1990), p. 61.

[62] Elsewhere, I have called this phenomenon "institutionalized mobilization." See "Postrevolutionary Mobilization in China: The One-Child Policy Reconsidered," *World Politics* (October 1990).

[63] Interview with former township-level family planning cadre, July 1990.

[64] Chen, "Chaosheng zinufei," pp. 61–62.

[65] Cheng and Wu, "Jiceng jihua shengyu," pp. 53–54.

[66] Chen, "Chaosheng zinufei," p. 61.

[67] Ibid., p. 61.

[68] Ibid., p. 61.

[69] *Renmin ribao*, October 24, 1988, p. 3.

The joint survey conducted in 1988 under the auspices of the SFPC revealed just how serious the statistical problems had become by that time. As shown in Table 1, the survey revealed that the majority of all provinces, municipalities and autonomous regions had birth rates at least 30 percent higher than originally reported for 1987. Despite demands for a more rigorous reporting system, however, in early 1990, SFPC director Peng Peiyun stated that there was a thirty percent gap between household registration figures and actual population size, and that the discrepancy was increasing, not decreasing.[72] This did not bode well for the upcoming national census in July 1990. As preparations got underway in the late spring, therefore, cadres were issued a carrot-and-stick ultimatum: if the census report was accurate, there would be no recriminations, even if the figures implied previous statistical fraud; if the census report was tampered with or poorly prepared, however, the repercussions would be severe.[73] How cadres responded to these warnings in not yet clear, but it is reasonable to assume that they were skeptical of Beijing's amnesty offer.[74]

TABLE 1. Percentage Differences in 1987 Birth Rates, Statistical Reports versus Survey Results

Number of Provinces *	Percentage Difference
4	under 10%
3	10-20%
6	20-30%
10	30-40%
6	40-50%

* Includes province-level municipalities and autonomous regions.
Source: *Renmin ribao*, October 24, 1988, p. 3.

IV. CONCLUSION

Although Beijing continues to exert formidable pressures on child-bearing age couples, the state's ability to enforce rural child-bearing limits has eroded since 1984. China's birth planning strategy was originally tailored to the political and economic processes associated with a command economy. For birth planning to be effective, fertility and population targets had to be disseminated along with material production targets, and local cadres had to be held strictly accountable for performance shortfalls. As the process of reform has reduced the number of assigned planning targets, relaxed the pressures to meet others, and generally loosened political constraints on local cadre behavior, the very structure that made it possible to enforce birth quotas has been undermined. That is not to say that local agents of the state are unable to enforce local birth limits when they make a concerted effort to do so, or when they are mobilized from above. Both central and local governments remain capable of bringing formidable powers to bear on individual couples. Nevertheless, market forces set loose since 1985 have fundamentally altered the incentive structures on which rural enforcement depended. Individual provinces and local governments weigh central pressures against local priorities, and discover that the appearance of concern over population growth can substitute for financial investments. Beijing can afford to speak as if all projects are equally important, but local leaders understand that they will be rewarded first and foremost for improved economic indicators; low birth rates will earn them applause, but no political or economic clout.[75] Similarly, grassroots cadres weigh the direct and indirect costs of rigorous enforcement against the risks of neglect; they often conclude that it is more rational and less risky to implement the letter of the law, i.e., collect fines for "illegal" births, and/or falsify statistical reports, than to confront fellow villagers. And finally, many couples have concluded that the rewards for having only one child pale in comparison to the tangible and intangible benefits of having two or more, even if the cost is migration to another locality or boarding one's children with cooperative relatives.

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[70] Yang, "Woguo nongcun jihua shengyu gongzuo," p. 64.

[71] Interview with former township-level family planning cadre, July 1990.

[72] *Xinhua*, December 13, 1989, in *FBIS*, January 5, 1990, p. 5.

[73] Beijing Domestic Service, March 21, 1990, in *FBIS*, April 17, 1990, pp. 24-25.

[74] Based on one report from Liaoning, that skepticism was probably well-founded. Just after the census was completed, a provincial radio report revealed that significant statistical errors had been uncovered in some localities, and that some "advanced" units did not deserve the title. See Liaoning Provincial Service, July 14, 1990, in *FBIS*, July 17, 1990, p. 45.

In short, partial market reforms have had the same effect in the realm of birth planning that they have had in the economic realm—creating skewed incentive systems that reward "undesirable" behaviors and decisions, encourage corruption, and waste scarce resources. Unlike the economic realm, however, these problems have generated little attention outside China, since they have helped to undercut the very concept of centrally planned, state-regulated child-bearing, a concept that many find repugnant or immoral. While this outcome may well be applauded and encouraged, it is nevertheless worth noting that it has come at a cost. Millions of children now live with a new kind of class stigma; they are "black" (*hei*, as in black market) or "illegal" children with uncertain status and few prospects. If they are female, they are less likely to be educated, whether legal or illegal. Studies by Chinese scholars show that female education is the single most important predictor of fertility; the failure to educate these children, therefore, increases the likelihood that China's compulsory program will be extended to a new generation. And finally, if declining investment in birth planning allowed some couples to avoid compulsory birth limits, it has also hindered the development of family planning services that many couples want—a ready supply of reliable and convenient contraceptives, high-quality medical services, and improved maternal and infant care.

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[75] Pei, "Thoughts on the Present Disarray," p. 64; Lu Xueyi and Zhang Houyi, "Peasant Diversification, Problems, Remedies," *Nongye jingji wenti* (Problems of Agricultural Economics) 1 (January 1990), pp. 16–21, in *JPRS-CAR* 90–040, May 29, 1990, p. 65. This tendency toward neglect is by no means universal. Certain provinces, like Sichuan and Jiangsu, have been exceptionally attentive to birth planning work. Elsewhere, individual leaders have been motivated by personal conviction, not pressure from their superiors, to focus on birth limitation.

It is true, of course, that China's birth planning program can be blamed for these side-effects. Without it, one might argue, there would be no "illegal" children, and funds invested in the mission of administering birth limits could be deflected to education, health care, and non-compulsory family planning services. Unlike the economic and political sectors, however, where influential constituencies support greater market reform and democratization, even the most tolerant advisors to the SFPC advocate a two-child limit. With the specter of a population in excess of 1.5 billion by the middle of the next century (even if current policies remain in force), reform advocates are cautious about liberalization of birth limits. More far-reaching economic or political reforms are therefore unlikely to result in the abandonment of state-regulated childbearing. At best, they may produce a more moderate, comprehensive and genuinely service-oriented approach to family planning—one that hopes for voluntary compliance but settles for less.

SOCIAL SECURITY FOR STATE-SECTOR WORKERS IN THE PEOPLE'S REPUBLIC OF CHINA: THE REFORM DECADE AND BEYOND

By Lillian Liu [*]

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I. SUMMARY

This paper deals only with social security for workers in the urban sector. Social security for the state work force, primarily income security programs for state enterprises, faces unprecedented challenges caused by a decade of policy changes and experiments in social security and enterprise and labor force reforms. Serious problems in funding and administering these programs have surfaced. Social security expenditures are rising rapidly. There are also signs of widespread mismanagement and discrepancies between enterprise implementation and local and central government guidelines, and between local government guidelines and central government regulations. Recent developments suggest that, while the central government is poised to correct some of these problems, some broad policy issues remain: Can China afford the high price of social security for state-sector workers as its population ages? How will Chinese leaders balance their inclination to placate state-sector workers with social security benefits against the need to control these costs?

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II. INTRODUCTION

In the 1980s the reformist government in the People's Republic of China (PRC) seems to have pursued a bifurcated social welfare policy for the country's rural and urban populations. Government reforms have apparently taken the social safety net from under the rural population while, at the same time, further enriched statesector workers and retirees in urban areas. By decade's end, critics both in China and in the West have pointed to the gross inequity in social welfare treatment between the rural and urban populations. They have especially noted the large sums provided for the welfare of the comparatively small group of state-sector workers and retirees.[1] The "mini-welfare state" (*xiao shehui*) in state work units (*danwei*) seems to be alive and well; state employees therefore are far from being weaned from the "iron rice bowl" that is considered by many reformers as a systemic drag on economic efficiency.[2]

Of the employee welfare expenditures (that is, nonwage compensation), the government-regulated social security programs averaged 72.5 percent during 1978–88.[3] Moreover, in late 1989 and early 1990, as China's economy suffered from the government's austerity program of tightened credits and investment, social security programs for the urban work force have become stabilizing wands the government can wield amidst widespread discontent. Yet all is not well in the freely spending social security programs in the state sector.

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[1] D. Davis, "Chinese Social Welfare: Policies and Outcomes," *China Quarterly* (September 1989): 579–97; W. Han, "Woguo zhigongfuli ji qi dui guomin sherufenpei de yingxiang (Welfare for urban workers and its impact on national income distribution, hereafter cited as 'Sherufenpei')," *Jinji Kexue* (March 1990): 12-9; C. Liu, "Lun zhongguo de eryuan shehui jiegou (On the dualistic structure of the Chinese society)," *Shehui* (August 1989): 20–5; Ibid (September 1989):22–7; Ibid (October 1989): 13–6; Ibid (November 1989): 4–9. For a contrary view see, M. K. Whyte, "Social Trends in China: The Triumph of Inequality?" in *Modernizing China*, eds. A. Doak Barnett and R. Clough (Westview: Boulder, CO., 1986), 103–23. For impact of reform on rural social welfare programs, see D. Davis, "The Provision of Essential Services in Rural China," in *Rural Public Services: International Comparisons*, ed. R. E. Lonsdale and G. Enyedi (Westview: Boulder, CO., 1984), 205–24.

[2] For a brief summary of debates on the culpability of the "iron rice bowl" between reformers and defenders of the system, see G. White, "Labor Contract System," *China Quarterly* (September 1987): 365–89; comments on "mini-welfare state," ibid, 366–7. For more recent criticism of enterprises as "xiao shehui", see Z. Wang, "Xiao shehui (Mini welfare state)," *Shehui* (January 1988): 31–2.

[3] Social security for purposes of this paper refers to government-regulated cash and in-kind compensation for lost income and for medical care in old age, sickness, disability (work or non-work related), unemployment, or upon death of the bread winner. This definition is in general agreement with that adopted by the International Labor Organization for comparative studies; it is, however, much broader than the U.S. usage of the term. In the United States, "social security" refers only to cash benefits for old age, survivors and disability.

Social security expenditures in this paper include only old-age and disability pensions and subsidies; costs of free medical care to retirees, employees (whether or not work-related) and their dependents; funeral grants to retirees and employees; and emergency relief grants to employees. Although cash benefits for sick leave, maternity leave, and temporary disability due to work injury are part of social security programs, they are paid out of enterprise budgets for wages and thus are not available for inclusion in social security expenditure. *Zhongguo Laodong Gongzi Tongji Nianjian, 1989* (Chinese Statistical Yearbook of Labor Wages, hereafter *Laodong Nianjian*) (Beijing, 1990), 372–3.

Besides social security, employee nonwage compensation items include, among others, allowances for transportation and personal hygiene; expenses for educational, cultural, and athletic events, and for employee welfare facilities such as canteens and nurseries.

III. Pre-1978 Social Security Programs

A. GENERAL DESCRIPTION

In 1978, on the eve of the post-Mao reforms, formal income security programs for the urban labor force were limited primarily to those employed in the state sector. The state-sector workers, almost 75 million strong, constituted 78 percent of urban workers, albeit only 19 percent of the country's total civilian labor force. They represented two groups: about 80 percent of them worked in state-owned enterprises, and the remainder served in the civil service system that included government and party organizations (*jiguan*) and cultural, scientific, and educational institutions (*siye*).[4] These two groups were protected by two formal social security systems providing extensive cash and in-kind benefits, as stipulated by two sets of regulations for nationwide application. First, the 1951 Interim Labor Insurance Regulations (as amended in 1953 and 1958, with subsequent instructions for implementation) detailed provisions for those working in state-owned enterprises. Second, a separate set of regulations provided comparable but somewhat more extensive benefits to those employed in the civil service system.[5]

The income security programs for those in state enterprises or civil service included: retirement pay of at least 60 percent of an individual's last month's standard wage, paid sick leave (up to 6 months per year) and maternity leave at 90 to 100 percent of pay after 6 years' service, and free medical care for employees and pensioners (50 percent of the cost for their dependents). In addition, these programs offered benefits and grants for workers and dependents in case of long-term disability (work or nonwork related), and for dependents upon the death of the worker or pensioner.[6] Employees did not contribute to the funding of the program, and their continuing eligibility was contingent on their employment at the work unit, which was guaranteed regardless of performance so long as they adhered to the "correct" political orientation. Finally, benefit payments were guaranteed by the state budget for all state work units. In the case of state enterprises, benefit expenditures were thus ensured, regardless of an enterprise's financial solvency.

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[4] By 1988, 74 percent of state-sector workers were employed in enterprises, and 26 percent in civil services. See Zhongguo Laodong Gongzi Tongji Ziliao, 1949–1985 (Statistics of labor wages in China, hereafter, *Gongzi Ziliao*, Beijing, 1987), 26–7; and *Zhongguo Tongji Nianjian, 1989* (Chinese statistical yearbook, hereafter, *TJNJ)* (Beijing, 1990), 111. For purposes of this paper, *jiguan* and *siye* are referred to collectively as civil service for lack of a better term. J. P. Burns refers to *jiguan* and *siye* as administrative units and service units, respectively. See his "Chinese Civil Service Reform: The 13th Party Congress Proposals," *China Quarterly* (December 1989): 740.

[5] For a legislative history of state-sector social security provisions, see K. Wang, et al, *Dangdai Zhongguo de Zhigong Gonzi Fuli he Shehui Baoxian (Employee Wages, Welfare Benefits and Social Insurance in Contemporary China)* (Hereafter, *Dangdai*, Beijing, 1987), 302–18; an English summary is in N. Chow's *The Administration and Financing of Social Security in China* (University of Hong Kong: Hong Kong, 1988), 22–7.

[6] For texts of 1951 Provisional Labor Insurance Regulations as amended in 1953, and 1958 together with implementing regulations, see *Laodong Gongzi Wenjian Xuanbian (Selected documents of labor and wages)* (Fujian 1973), pp. 275–306, 407–18, and 447–9.

B. INCOMPATIBILITY WITH MARKET-ORIENTED ECONOMY

Social security programs thus constituted part of a large overall package of nonwage compensation items that characterized the "iron rice bowl" for state-sector employees, a package that also included low-cost housing and extensive food and nonfood allowances. However, these very benefits that seemed to have worked well under a centrally planned economy designed to reward its workers in the industrial sector and to complement a wage policy of ensuring job security and equal compensation have been deemed by reformers as antithetical to "market-oriented socialism." Such programs, it is argued, have tended to foster workers' dependence on the enterprise and the state for their well-being without demanding responsibility in return.

Under pre-1978 programs, state-sector employees were tied to their respective work units, which administered all aspects of the social security programs, from determination of eligibility to benefit payments.[7] This highly decentralized administration, in the absence of an established mechanism for portability of eligibility and benefits, discouraged labor mobility across enterprises, industries or sectors—a pre-condition to an open economy. To reformers, pre-1978 social security programs were also seen as inadequate for preparing workers to face the brave new world of a market-oriented economy. There were no formal provisions for adjusting benefit payments to price changes, and no unemployment insurance. The special privilege of benefits awarded to only state employees were regarded as a disincentive for workers to seek employment outside the state sector, thus indirectly hindering the development of collective and private enterprises.[8]

The move toward an open economy would by definition entail a contracting state sector and expanding collective and private sectors. The so-called "big" urban collective enterprises (or *de facto* state enterprises) had adopted provisions equivalent to those for state enterprise workers. In addition, some smaller collectives offered modest retirement plans, their finances permitting. For lack of government backing, collective plans were regarded as unstable sources for income maintenance.[9] There was no income security protection whatsoever for workers in the then negligible private sector.

IV. MAJOR SOCIAL SECURITY POLICY INITIATIVES, 1978–1989

Despite the reformers' concerns, the social security programs established in the early 1950s are still operative today. The reformist government has kept most of the program regulations intact, making changes in three respects only. First, it improved many of the retirement benefits, including making ad hoc adjustments to pension benefits to offset price changes. Second, in 1986 it set up a special contract workers' retirement pension system for state employees hired under a newly created labor contract system. Finally, it introduced unemployment insurance for state enterprise workers, also in 1986. All three steps reflected the government's efforts to prepare the state-sector labor force for the transition to a market-oriented economy.

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[7] For a detailed listing of various subsidies and allowances in English, see Chow, *Administration and Financing*, 92–4. A. Walder has discussed extensively the predominant role of enterprises in all aspects of workers' lives; see his *Communist Neo-Traditionalism: Work and Authority in Chinese Industry* (University of California Press: Berkeley, CA., 1986).

[8] See, for example, "Article Urges Establishment of Comprehensive Labor Insurance System," *JPRS-CAR 89-089*, 33–4.

[9] In 1978, about two-thirds of collective workers were covered by some form of income security programs. See, *Zhongguo Shehui Tongji Ziliao, 1987* (Chinese Social Statistics, hereafter *Shehui ziliao*) (Beijing, 1987), 111–2.

A. IMPROVEMENTS TO EXISTING SOCIAL SECURITY PROGRAMS

Most of the improvements to the existing social security programs have related to retirement pensions. They were designed to retire older workers and help make room for unemployed youths. For example, the 1978 amendments to the retirement regulations and subsequent instructions in the early 1980s (1) enforced, for the first time, the statutory mandatory retirement age of 60 for men and 55 for women (age 50 for female blue-collar workers); (2) allowed retirement 10 years sooner if poor health was a factor; (3) relaxed minimum qualifying conditions for retirement (for example, the continuous service requirement was reduced from 20 to 10 years); (4) raised pension benefits; (5) promised the hiring of retired workers' unemployed offspring; and (6) offered, to middle- and upper-ranking Communist party and technical cadres, a special preferred pension benefit (*lixiujin*)—at full rate of pre-retirement pay plus all the perquisites associated with their position. Since 1985 the government has approved payments by enterprises of periodic ad hoc subsidies to retirement pensions to compensate for inflation. Concurrent with wage increases for state-sector employees in late 1989, benefits for retirees and the disabled were adjusted upward as well.[10]

B. SOCIAL SECURITY FOR CONTRACT WORKERS

The State Council's 1986 Interim Regulations for Implementation of the Labor Contract System by State-Owned Enterprises support labor force reform by putting new state-sector employees on fixed-term employment contracts.[11] Workers thus employed would have their contracts renewed if they performed satisfactorily; they do not have the protection of life-long employment as permanent workers do. It is expected that the life-tenure system will, over time, phase out of practice as enterprises will be populated by a growing number of contract workers replacing the aging permanent workers.

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[10] For a full discussion on the liberalization of retirement regulations in the state-sector income security programs for both government institutions and enterprise workers, see D. Davis, "Unequal Chances, Unequal Outcomes: Pension Reform and Urban Inequality," *China Quarterly* (June 1988): 230–7. For texts of 1978 retirement regulations and subsequent amendments to retirement and social security programs, see *Shehui Wenjiao Xingzheng Caiwu Zhidu Zhaibian (Selections on social, educational, administrative and financial systems)* (Beijing, 1979); Zhonghua Renmin Gongheguo Guowuyuan Gongbao (hereafter, Guowuyuan Gongbao) 27 (1989): 973-82; *Xinbian Laodongzhengce Wentijieda* (A new compilation of Q and A to labor policies, hereafter *Xinbian*) (Beijing, 1989), 242–54. Improvements to other programs included extending the paid maternity leave from 56 days to 90 days, for example. Senior professional women may now retire at age 60 rather than age 55. "Nugaozhi tui(li)xiu de singuiding (New regulations regarding the retirement of senior professional women)," *Zhongguo Funu* (September 1990):39.

[11] G. White, "Labor Contract System," 365–89. For text of the Interim Regulations, see *Renmin Ribao*, 10 September 1986, 2.

The 1986 regulations offer workers employed under the contract system a package of retirement pensions, medical care, and other social security benefits comparable to that for permanent workers. There are two major differences in the types of plans offered, however. First, contract workers must help finance their retirement pensions (at 3 percent of their wages, while the enterprise contributes 15 percent toward the buildup of a special retirement fund). Second, instead of individual enterprises, local governments—specifically, newly created social insurance agencies (SIAs) under city or county labor bureaus—are charged with the administration and fund management of these programs. Presumably, as workers under labor contract gradually outnumber permanent workers in the state sector, the predominant retirement pension will be one funded with worker-employer contributions together with state subsidies, and will be administered by local governments.

C. UNEMPLOYMENT INSURANCE FOR REDUNDANT STATE ENTERPRISE EMPLOYEES

As economic reforms continued in the 1980s, the government anticipated the need to provide income security for redundant state enterprise employees. These include workers whose employment contracts expire, employees in bankrupt or near-bankrupt enterprises, and workers who are laid off from state enterprises. The 1986 Interim Regulations for State-Owned Enterprise Workers' Waiting-for-Employment Insurance provide compensation for temporary unemployment to these individuals. Unemployment benefits include medical care as well as 65–70 percent of workers' basic wage for 12 to 24 months, depending on the length of service before unemployment. These programs are financed by the employer, who contributes 1 percent of the standard wage bill, and by local government subsidies. Employees do not contribute.[12]

Having decided to rely on the pre-reform state institutions and enterprises to carry out modernization initiatives, the reformist government seems intent on protecting the privileges of their employees by keeping the pre-1978 social security programs intact and by improving benefits for retirees and workers. On the one hand, the post-1978 social security provisions have thus further enhanced the image of the state work unit as a "mini-welfare state." On the other hand, they represent the government's attempts to remold social security provisions for transition to a new economic order. Provisions have been made to prepare current state employees for contingencies of reforms such as inflation and unemployment. A retirement program requiring contributions from employees under the contract system has been introduced to gradually phase out the noncontributory program for permanent workers.

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[12] For text of Regulations, see *Renmin Ribao*, 10 September 1986, 2.

V. PROGRAM IMPLEMENTATION AT THE LOCAL GOVERNMENT AND ENTERPRISE LEVELS

More important than central government policies to social security developments in the 1980s were the practices of city and county governments and of enterprises where central policies and programs were implemented and "experiments" carried out. The Ministry of Labor, which has the responsibility for policy development and oversight of social security programs, has no local offices to implement or enforce compliance of its regulations by individual enterprises. Labor bureaus at provincial, city, and county levels are subordinate bodies of their respective governments, and only *indirectly* subordinate to the labor ministry in Beijing.

Throughout the 1980s the central government allowed local governments and individual enterprises to conduct "experiments" in social security as they adjusted to changing conditions induced by enterprise and labor force reforms. In effect, social security programs as stipulated by the central government could best be regarded as the established "national norm" from which local authorities can and still do deviate for their own purposes. The Ministry of Labor appeared far more effective in promoting particular "experiments" deemed constructive to social security developments than in terminating practices that are contrary to its policies.

This decentralized approach may have been necessary in the absence of institutional control from the Ministry of Labor over local government and enterprise labor officials. It was also in keeping with the reformist government's overall policy of loosening central controls. By the decade's end, it has become apparent that certain earlier improvisations at the enterprise and local government levels have evolved into agendas with broad regional and even nationwide implications. Many, however, remained local and isolated practices with or without central government blessings.

A. RETIREMENT PENSIONS AND CITY/COUNTY SOCIAL INSURANCE AGENCIES (SIAS)

1. Permanent Workers

A good example of how enterprise and local government experiments evolved out of pressures from labor force and enterprise reforms and became adopted by the central government as its policy agenda is the resource pooling for retirement pensions for state enterprise permanent workers.

a) Rapid Rise in Retirees Adds to Administrative and Financial Burdens of Enterprises

In addition to improvements in retirement benefits introduced by the central government, three developments in the 1980s contributed to mass retirement by permanent workers who were middle-aged and older. First, many provincial, city, and county governments took advantage of loosened central control and further improved benefits for retirees under their respective jurisdictions. According to one analyst, by 1988 retirement benefits for workers with 20 years' service ranged from 80–95 percent of the pre-retirement basic wage rather than the 75 percent stipulated under the

1978 retirement regulations.[13] Second, since 1978, the increased opportunity for pensioners to earn extra income by working in a "second employment" has made the option of early retirement more attractive. Wage-earning pensioners continue to receive full retirement benefits, complete with free medical care.[14] Third, starting in 1986, a central government initiative to "optimize labor organization" (*yiuhua laodong zhuhe*) by urging enterprises to reduce surplus and unproductive workers has also led to early retirement of middle-aged and older workers.

Some enterprises, taking advantage of their prerogative to administer social security programs, have relaxed the "poor health" or "total disability" requirements so that employees may retire 10 years sooner than the statutory retirement age.[15] All told, the number of pensioned retirees from the state sector increased from 2.8 million in 1978 to 15.4 million in 1988. Expenditures for pensioners—including retirement pensions, health care, and various subsidies—rose from 1.63 billion yuan to 25.7 billion yuan in the interim.[16]

The vast number of retirees has placed unprecedented administrative and financial demands on enterprises. In older industries, where the number of retired workers makes up a large proportion of or even outstrips the number of active workers, the administrative burden of processing claims and paying benefits places extra demands on active employees' time and productive energy. Moreover, the large and escalating retirement expenses have precluded any prospect of profits and bonuses—a disincentive for active employees to work hard, therefore contrary to the overall objective of improving worker productivity.[17]

b) Resource Pooling and the Role of City/County Governments

The intense pressure on enterprises with an inordinately heavy financial burden for retirement pensions has prompted them to propose the pooling of retirement funds. Resource pooling, or unified financing (*tongchou*), began in 1984 as "experiments" in isolated cities and counties when hard-pressed enterprises sought assistance from local labor bureaus to help pay pension benefits to their retirees. By year-end 1988, this practice had expanded to 2,141 cities and counties (out of 2,821, total), and 49 prefectures (out of 334). Local governments have had to overcome the resistance of enterprises with a relatively young work force to take part in the pool, often reimbursing them through tax write-offs. As a result of negotiations involving local labor and finance authorities, and considerable promotion efforts by the Ministry of Labor, these city and county governments have adopted compulsory resource pooling for retirement insurance among enterprises across industry lines.[18]

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[13] X. Wei, "Chengshi yanglaojin zhidu gaige chuxin chutan (Preliminary discussions on urban retirement pension system reform)," (unpublished manuscript, Beijing, 1988), 2.

[14] Some 3.6 million out of 22 million state-sector pensioners are earning wages through "second employment." "Laodong bowen (Labor news)," *Zhongguo Laodong Kexue* (hereafter as *ZLK*) (April 1990): 10.

[15] For examples, see X. Wang, "Henansheng anzhi qiye fuyu renyuan de qingkuang (Making arrangements for surplus workers in Henan province)," *ZLK* (January 1989): 46; "Guanyu funu shixing jieduan jiuye de jizhong yijian (Thoughts on the practice of phased-employment for women)," *ZLK* (January 1989): 38–9; "Gaohao laodong zhidu gaige, tuoshan anzhi fuyu renyuan (Improve labor reform, make proper arrangements for surplus workers)," *ZLK* (December 1988): 33–5.

[16] *TJNJ, 1989*, 152. Separate totals for state enterprise and civil service retirees are not readily available. In 1988 the number of pensioned retirees from *all* urban employment, including those from collective enterprises, was 21.2 million, receiving 32.1 billion yuan in benefits. By the end of 1989, the totals were 22 million urban retirees receiving 37.5 billion yuan in benefits. C. Gu, "Insurance to Benefit All Chinese Employees," *China Daily* 10 August 1990, 1.

1 yuan equaled 61.3 U.S. cents at year-end 1978, and equaled 26.9 U.S. cents at year-end 1988.

[17] S. Pei, "Guanyu gaige tuixiujin zhidu de sikao (Thoughts on the reform of retirement pension system)," *Jingji yu Guanli Yenjiu (Economics and Management Research)* 5 (1986): 36–8; and H. Feng, "Shanghaishi quanmin suoyouzhi qiye shixing tuixiufei tongchoude qingkuang (The implementation of resource pooling in state enterprises in Shanghai municipality)," *ZLK* (June 1987): 12-5.

The local labor bureaus have set up subordinate SIAs (the same agencies administering contract workers' pension programs) to take on all the responsibilities involved in carrying out pension pooling for the retirement program for permanent workers—for example, making certain that enterprises keep accurate accounts of their respective total wage bills (the base for computing enterprise contributions to the pool), lists of retirees, and benefit payments due. These agencies must also verify and transact the amount each enterprise owes to the pooled fund or vice versa.[19]

Having begun as an improvisation to pay benefits for enterprises overburdened with a large number of retirees, pension pooling has led to two potentially significant developments that have gone beyond its original purpose. First, the city and county governments have set uniform contribution rates and benefit levels for all participating enterprises under their respective jurisdictions. Furthermore, for the first time, an enterprise's management of its retirement pension program became subject to local government supervision. One report indicates that the trend is heading toward not only expanding the geographic base of pension pooling, but also transferring a part of retirement program administration to local governments. By the end of 1988 one province (Fujian) had begun region-wide pooling in retirement funds. In addition, SIAs in 235 cities and counties (or 11 percent of those practicing resource pooling) assumed the direct responsibility for paying benefits to pensioners.[20]

Nevertheless, the risk sharing is still limited to individual cities and counties, with the exception of Fujian Province. Cities and counties have made their own arrangements with local enterprises, and they have set their own contribution rates and benefit levels. Also, for most city/county governments the role of SIAs at present is largely limited to monitoring pension pooling; the eventual takeover of the administrative responsibilities involving millions of workers remains in the distant future. With enterprises operating at losses or at reduced capacity, or even lying idle, as a result of the government's austerity program that started in September 1988, these agencies have had difficulty in ensuring that participating enterprises make timely payments to the pool, and that there are adequate funds to pay enterprises which stand to benefit from the pool. Under pay-as-you-go financing, SIAs still have to protect the limited reserves (which amount to only 1.9 months of benefit outgo at year-end 1988, nationwide) from erosion in value and from misappropriation. In cases of shortfalls, city/county governments presumably provide subsidies.[21]

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[18] *Guoying qiye zhigong tuixiu feiyong shehui tongchou banfa huiji* (Collection of resource pooling arrangements for state enterprise retirement pension funds hereafter *Guoyin*) (Beijing, 1987); G. Zhang, "Guangdong shixian quansheng yi shixian wei danwei tongchou tuixiujijin de tihui (Understanding the city and county-based resource pooling of retirement pension funds in Guangdong Province," in *Guangdongsheng shehuilaodong baoxian ziliao xuanbian (Selected documents on socialized labor insurance in Guangdong Province*), volume 8 (Guangzhou, 1988), 256-66. "Yijiubabanian quanguo tuixiufeiyun shehui tongchou de jiben qingkuang (Status of resource pooling of retirement expenditures in China in 1988, hereafter, Yijiubabanian tongchou,)" *ZLK* (November 1989): 41; and L. Han, "Nuli tuijin shehui baoxian zhidu gaige (Diligently promote the reform of social insurance system, hereafter 'Nuli')," *ZLK* (May 1990): 10-2. Generally speaking, only state enterprises under the jurisdiction of city and county governments must participate in the pool. Provincial-level or national ministry enterprises (such as railway, post, and telecommunications) are exempt.

[19] For descriptions of the duties and responsibilities of these resource pooling agencies, see *Guoying*.

[20] For example, see Jimo County Labor Bureau, "Women shi ruhe dui lituixiu zhigong shixing yanglao baoxian shehuihua guanli de (How we implemented socialized management of old-age insurance for retired workers)," in Qingdao Municipal Labor Bureau's *Qingdaoshi shehui laodong baoxian zhidu gaige cailiao huibian* (Collection of documents regarding socialized labor insurance system reform, hereafter, *Qingdao cailiao huibian* (Qingdao, 1988), 103-15; and H. Li, "Women shi jenyang yunhao tongchou jijin de (How we effectively manage the pooled fund)," *Dandong Diaoyen* (September 1988): 13-5. See also, "Yijiubabanian tongchou," *ZLK* (November 1989): 41; and *TJNJ, 1989*, 3.

2. Contract Workers

The SIAs monitoring pension pooling for permanent workers are not only responsible for the fund management but also the administration of retirement pensions for contract workers. Because contract workers are comparatively young (typically under age 35) and are years away from retirement, these agencies' primary task at present is the collection of retirement contributions from enterprises, and the registration of contract workers in the retirement program. They have not yet begun to process claims or distribute benefits. At year-end 1988, workers under labor contract exceeded 10 million; only 6.5 million were registered to contribute to the program a year later, however.[22] Protection of these pension funds from erosion in value and from mismanagement is especially important because they are established as a partially funded program. Contributions collected are deposited in special accounts to pay contract workers for benefits due in the future.

B. UNEMPLOYMENT INSURANCE AND CITY/COUNTY LABOR SERVICE COMPANIES

The implementation of unemployment insurance rests with city/county labor service companies (LSCs). These companies were established by city and county labor bureaus as early as 1979. They began by providing job referrals, conducting occupational training, and creating jobs by investing in and setting up collectives for hiring some of the new entrants (averaging about 4.7 million per year during the 1980s) to the urban labor market as a whole. Their responsibilities have expanded since 1986 to encompass the administration of unemployment insurance for dismissed state enterprise employees, including the collection and management of the unemployment insurance fund and payments to beneficiaries. Benefit levels and implementing procedures are subject to specific provisions determined by provincial, city and county governments based on the national norm stipulated in the 1986 Interim Regulations.[23] In some locales, these companies set up branch and subbranch offices in districts (*qu*) and at the street and resident committee level to help register the unemployed, process claims, and make payments to beneficiaries.

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[21] M. Fang, "Weishemo zhigong tuixiu yanglaojin shoujiao nan (Why is it difficult to collect contributions to the retirement pension fund)," *ZLK* (April 1990): 32; and "Laodong bumen huyu wanshan yanglaojin shehui tongchou (The labor administration appeals for perfecting resource pooling of retirement pension)," *Jingji Cankao* (Economic Information), 22 June 1990, 1; Z. Shi, "Wei baozheng tingchan qiye lituixiu zhigong shenghuo (To guarantee the livelihood of retired workers of non-operative enterprises)," *ZLK* (April 1990): 47; and unpublished data, Ministry of Labor.

[22] C. Song, "Yijiubajiunian shangbannian quanguo laodong gongzi qingkuang ji quannian zhanwang (Nationwide labor wages during the first half of 1989 and prospects for the entire year)," *ZLK* (December 1989): 12; L. Han, "Nuli," 10–11.

By 1989 there were over 3,000 local government LSCs nationwide. With the majority of their services centering on job training and placement, information is scarce on how well these LSCs have been administering unemployment insurance benefits. National totals are not readily available for the number of state employees who have become unemployed since the 1986 regulations took effect, for those who have since been registered on unemployment rolls, or for those who actually have been receiving benefits. It is believed that, of the average 2.8 million unemployed in the course of 3 years from 1986 to 1988, former state enterprise employees constituted only a small minority. Generally speaking, many enterprises have been reluctant to lay off workers—partly due to lingering commitment to full employment, partly because of the government's belief that keeping workers tied to enterprises can better ease workers' resentment. In late 1989 and early 1990, when, reportedly more than 6,000 enterprises operated at a loss and two-thirds of urban factories were either closed or operating below capacity, many kept their workers on payroll with reduced wages (by 30 to 40 percent), instead of placing them on unemployment rolls.[24]

There are three sources of funding for LSCs: local government appropriations, income generated from affiliated collective enterprises, and contributions to the unemployment insurance fund from enterprises and local governments. Their diverse activities and their major focus on providing jobs for new entrants to the labor force make it difficult to determine whether LSCs have set aside a certain portion of their income for benefit payments to laid-off state enterprise employees. With the central government's rectification campaign in full swing in late 1989, many LSCs have been criticized for laxity in accounting, for widespread misuse and abuse of funds, and for practices such as placing jobs for those with connections rather than ability. Besides, many LSCs and their affiliated collectives have been established as profit-making enterprises with rather unstable existence.[25]

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[23] *TJNJ, 1989*, 123; *Xinbian*, 283-4.

[24] Z. Ren, "Guanyu jiejue qiye fuyu renyuan wenti de sikao (Considerations regarding the resolution of enterprise surplus workers)," *ZLK* (November 1988): 21-3; G. Yao and M. Fang, "Qiyejia de kunao (Entrepreneurs' dilemmas)," *Shehui* (May 1989): 28-31; "Li Boyong fubuzhang zhai quangou laodong fuwu gongshe gongzhohueyi ji zhongguo laodong fuwugongshi yenjiuhui lishihuiyi shang de jianghua (Deputy Minister Li Boyong's speech at the conference of work of All-China Labor Service Companies and the board meeting of the Research Committee of China Labor Service Companies, hereafter, Li Boyong)," *ZLK* (April 1989): 3-5; U.S. Central Intelligence Agency, "The Chinese Economy in 1989 and 1990: Trying to Revive Growth While Maintaining Social Stability," report presented to the Subcommittee on Technology and National Security, Joint Economic Committee, 28 June, 1990; *TJNJ, 1989*, 123. In 1989, the unemployed were reported to total 3.78 million; see *Zhongguo Tongji Zhaiyao, 1990* (A Statistical Survey of China, 1990) (Beijing, 1990), 18.

C. MEDICAL CARE AND OTHER SOCIAL SECURITY PROGRAMS

Besides retirement pensions and unemployment insurance, the central government issued no major policy initiatives in social security throughout the reform decade, except for minor improvements.[26] Whereas retirement pension and unemployment insurance programs have had the benefit of local government agencies (SIAs and LSCs, respectively) in monitoring the funding and, in some cases, in taking over the administration of these programs, this is not the case for remainder of the social security programs—such as medical care, work-injury compensation, and cash benefits for sickness and maternity leave. For enterprises that have adopted the enterprise contract responsibility system and are accountable for their own profits and losses, the funding and administration of these social security programs depends entirely on enterprise management. The status of these programs, therefore, has become far more fluid, or unstable, than retirement and unemployment programs.

Other than retirement pensions, the medical care program (whether or not work-related) has been the most costly and problematic. The total of medical care costs for state-sector employees and retirees has constituted a large, if not always the largest, proportion of social security expenditures overall. Medical care costs rose from 2.73 billion yuan in 1978 to 15.24 billion yuan in 1988, and, respectively, constituted 54.6 percent and 40.0 percent of total social security costs. The 1978 per capita expenditure on medical care for employees and retirees—35.3 yuan, or 66.5 yuan when adjusted to the 1988 price level by the urban consumer price index—almost doubled to 132.3 yuan in 1988.[27]

Attempts to control the rapid increase in health care expenses have met limited success, in part because enterprises have no control over health practitioners and/or hospital administrators who are prone to overcharges, waste and abuses (often in collusion with state employees and retirees requesting free medicines for themselves and their families, for example).[28] Some cost-conscious factory managers have introduced various measures (or "experiments") to control health expenditures. The most common approaches adopted, for example, have been to impose co-payments from beneficiaries, or to pay each employee a pre-determined sum per month for medical expenses regardless of actual costs of medical treatments. This latter policy has become especially popular because of its effectiveness in controlling cost and its simplicity in administration. It nevertheless has created hardship for employees and their family members whose treatment for illnesses far exceeds the allotted sum.[29]

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[25] *ZLK* (March 1990): 36–7; "Guanyu laodong fuwugongsi fazhan he jianshezhong rogan wentide yijian (Thoughts on issues regarding the development of labor service companies)," *ZLK* (April 1989): 47-8; S. Ni, "Shinian laodong jiuye de huigu yu zhanwang (Review of a decade of labor force employment and its future prospects)," *ZLK* (March 1989): 3–7; "Zhongda tanwuan beichachu (A serious case of embezzlement under investigation)," *Zhongguo Laodong Bao* (hereafter, *ZLB*) 6 December 1989, 1; "Ankang diqu qingli zhengdun laodongfuwu gongsi chengji kexi (Rectification of labor service companies in Ankang prefecture brings good results)," *ZLB* 24 March 1990, 3; and "Jichen laodongfuwu gongsi ganbuzhigong 'bapan' ('Eight wishes' of the low-level employees at labor service companies)," *ZLB* 10 January 1990, 3.

It is also difficult to assess the effectiveness of these LSCs because reports about these companies do not distinguish the local government LSCs that have the mandate to administer unemployment insurance from some 50,000 other LSCs created by and affiliated with large state or collective enterprises. Enterprise funded and managed LSCs generally engage in profit-making activities to provide job opportunities for their surplus workers and offspring of enterprise employees. Together, all LSCs have 700,000 employees, more than 4,000 vocational schools, and 230,000 service "points" (*dian*) extending to districts, and street and resident committee levels in cities and towns and even to rural towns.

[26] In 1988, the paid maternity leave was extended from 56 days to 90 days, for example. *Xinbian*, 254.

[27] Derived from data in *Gongzi ziliao, 1949–1985*, 191; *Shehui ziliao*, 1987, 114; and *TJNJ, 1989*, 101, 151–2, 688. Separate totals for civil service and enterprises are not available for the years 1978 through 1985.

The medical care costs cited above represent only the accountable totals of health-related expenditure in social security; paid wages for sick leave, maternity leave, or absence due to work injuries are computed as part of wage totals and not available for inclusion as social security expenditures. Expenses of this type can be substantial, given reports of the widespread practice among workers, who were generally underemployed, taking extended sick leave (available for 6 months per year at full pay after working in the state sector for 8 years) to engage in private businesses or consultative ventures outside the state sector. In some cases, enterprise management has awarded underemployed workers extended leave for as long as 5 years at full or reduced pay as it attempts to "optimize labor organization" or "eliminate" or "digest" (*xiaohua*) surplus and nonproductive workers.[30]

Another problematic aspect in the largely unsupervised enterprise administration of all social security programs is the arbitrary and erratic approach to processing claims. The determination of eligibility and benefit amounts was not always carried out according to central government regulations or local government guidelines, if any. Sometimes there were no observable standards within the same enterprise. Benefit payments were often dependent on the availability of funds, favoritism, or the aggressiveness of the claimant. Such practices have become so prevalent in the administration of compensation for work injuries, for example, that a recent report concluded that government regulations for this program exist only on paper.[31]

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[28] For examples, see Y. Xie, et al, "Guanyu guoyin qiye laobao yiliao zhidu gaige de jige wenti (Problems in reforming the enterprise labor insurance medical care system)," *ZLK* (November 1988): 10–3; "Minister Urges Better Medical Care, Lower Costs," *FBIS-CHI-90-050* 14 March 1990, 27.

[29] In one city, some 83 percent of sampled enterprises have taken some cost-cutting measures in medical care expenditures. Xie, et al, 10–1; "Woguo gongfei yiliao he laobao yiliaozhidu de gaige (Reform of civil service medical care and labor insurance medical care systems in China)," in *Gaige he wanshan woguo de shehui baozhang zhidu* (Reform and make perfect China's social security system) (Beijing, 1988), 80–8; S. Gui, "Renko laolinghua yu gaige yiliao shoufei (Population aging and reform of co-payment for medical care)," *Shehui* (April, 1987): 18–20.

[30] "Qingdaoshi jiaqiang dui 'changqi binhao' guanli (Qingdao city strengthens its management of 'long-term sick leaves')," *ZLB* 10 January, 1990 1; Xie, et al, 10–3; and "Gaohao," 34. It is estimated that, nationwide, about 15 million urban workers engage in a second employment. See Z. Sun, "Guanyu gongzi shenhua gaige mianlinde wenti he duice (Problems and policies regarding wage reform)," *ZLK* (May 1990): 3–9.

[31] "Mudanjiangshi laodongju (Mudanjiang city labor bureau)," *ZLB* 8 November 1989, 2; "Dandongshi jiuzheng jiangdi, quxiao zhigong baoxian fuli daiyu de wenti (Dandong city corrects problems in lowering and eliminating workers' welfare insurance benefits)," *ZLB* 8 October 1989, 1; "Chengbao buke diulao ([The adoption of enterprise] contract system should not condone negligence of the aged)," ibid, 2; "Qiye zhigong fuli jijin chaozhi yin yinqi zhongshi (Attention

Continued

Enterprises' disregard for the proper administration of income security programs became evident by the late 1980s. Reports surfaced that the personnel files—including employee information such as position titles, wage records, and service tenure—upon which enterprise officials determine eligibility and benefit amounts, were in disorder and subject to falsification and unauthorized alterations.[32]

Further confounding the breakdown in the administration of social security is the absence of an established appeals system whereby a disgruntled employee can seek redress. The 1987 Interim Regulations for Settlement of Labor Disputes at State Enterprises do not include disputes regarding social security issues. Written complaints have flooded local and central labor offices, reporting nonpayment of benefits and willful reduction in benefits, for example. Many retirees or their offspring visit these offices themselves hoping to get better results. The final resolution of these problems often requires the personal intervention of a local labor bureau chief and other government officials having direct jurisdiction over the enterprise.[33] Certainly, the arbitration of disputes is more difficult if only because of the pervasive discrepancies between enterprise "experiments" and local government guidelines, and between local government "experiments" and central government regulations.

D. SUMMARY COMMENTS

In the 1980s, as the central government clung to social security programs established in the early 1950s, social security developments in the reform decade have been driven primarily by local government initiatives and enterprise "experiments." The most significant development has been the evolution of resource pooling of retirement pensions because it has made social security less dependent on individual enterprises for funding and administration. However, this development has not reached other social security programs. Also important but with limited impact were experiments in social security cost cutting (as in medical care) carried out by some local governments.

Two critical problems have surfaced. First, the 1980s witnessed the unprecedented rise in social security costs at the expense of enterprises and, ultimately, of the state tax revenues because social

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should be paid to shortfalls in enterprise employee welfare funds)," *ZLB* 13 January 1990, 1; "Zhigong siwang sangzangfei chaozhi wenti jidai jiejue (Problems of deficits in death and funeral grants for workers urgently await resolutions)," *ZLB* 22 November 1989, 2; X. Zheng and W. Ju, "Xinde gongshang baoxianfagui ying jingkuai chutai (New regulations on workers' compensation should be issued as soon as possible)," *ZLK* (June 1990): 19–21.

[32] H. Cai, "Jiaqiang zhigong dangan guanli, wei gaohuo qiye fuwu (Strengthen the management of employee personnel files, facilitate enterprise services)," *ZLK* (November 1989): 23–4; "Zhigaizhong geren dangan zaojia xianxiang yenzhong (The phenomenon of falsifying individual personnel files in the process of revising position titles is considered serious)," *ZLB* 5 May 1990, 3.

[33] "Wanshan wuoguo laodong zhengyi chuli lifa ruogan wenti (Several issues concerning the improvement of legislation for settling labor disputes in our country)" *ZLK* 3 (1990): 20–1; "Anshanshi Laodong Ju (Anshan city labor bureau)", *ZLB*, 8 November 1989, 2. For additional reports of complaints in recent years against arbitrary practices of the Labor Insurance Regulations, see items for Shanghai municipal labor bureau, Hebei provincial labor bureau, Mudanjiang city labor bureau, and Hubei provincial labor bureau, respectively, ibid. Apparently, civil service retirees were also suffering from administrative problems. In one case, it took a retired cadre 10 years (from June 1979 to May 1989) to finally settle his appeal to correct his service tenure from 28 to 31 years. *ZLB*, 6 December 1989, 3.

security expenditures are operating costs before tax. Total social security expenditures multiplied from 5 billion yuan in 1978 to 38.18 billion yuan ten years later, or 1.4 percent and 2.7 percent of the gross national product (GNP) for the respective years. Annual social security expenditures per covered employee and retiree rose from 77.4 yuan to 331.4 yuan during the same period. The 1988 figure is more than twice the 1978 amount adjusted for inflation (145.8 yuan).[34]

Second, the arbitrary and capricious practices of enterprises in implementing social security programs have made them a less-than-reliable mechanism for income protection. At a time when these programs could have served as effective tools to mollify worker discontent during the 1989–90 economic downturn, the lack of reliability in social security programs may have in itself become a cause of worker frustration. From the perspective of workers, reform-minded experiments such as cutting benefits and imposing co-payments to medical care were regarded as unwelcome violations of central government regulations by enterprises and/or local governments, and as such, they became causes for appeals.

VI. Recent Developments and Remaining Policy Issues

A. RECENT DEVELOPMENTS, 1989–90

Central and local government measures in 1989–90 have focused on shoring up financing and administration, and revisions of central government regulations of social security programs. In financing retirement pensions, some local governments have merged the pension pools for permanent workers and for contract workers, hitherto set up as separate accounts. As a result, shortfalls in pension pools for permanent workers (which are financed on a pay-as-you-go scheme, and are thus vulnerable to enterprise losses and shutdowns) can be made up, albeit temporarily, by the accumulated retirement reserves for contract workers.[35] These city and county governments, therefore, have moved another step toward transforming an enterprise-managed retirement system into a social insurance system by broadening the base of risk sharing.

Proposals for setting up reserve funds through resource pooling to finance medical care programs and workers' compensation (cash benefits for work-related injuries) have emerged as well. Whether this practice, following the development of retirement pension pools, will take hold and give rise to localized standardization in programs and to city/county government supervision and control over the administration of these programs, remains to be seen. Medical care and workers' compensation programs are more difficult to administer than retirement pensions because of the complicating role of health care providers. The lack of established standards for determining the degree of injury and disability as well as the level of reimbursable care and compensation also causes administrative problems.[36]

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[34] *Gongzi ziliao, 1949–1985*, 191; *Shehui ziliao*, 114; *TJNJ, 1989*, 17, 101, 151–2; 688.

[35] For examples, see J. Mao and Y. Zhang, "Tuixiufeiyong shehuitongchou jitifangshi chutan (Preliminary investigations into methods for computing contributions to resource pooling for retirement expenditures)," *ZLB* 20 January 1990, 3; "Yenchengshi shixing tuixiu yanglao baoxian yitihua tongchou (Yencheng city implements unitary resource pooling for retirement pensions)," *ZLB*, 28 April 1990, 1.

Local governments and central government agencies have taken steps to improve the administration of SIAs and their linkages with the Ministry of Labor. Some city and county labor bureaus have announced their plans to acquire computer technology to enhance the SIAs' ability to monitor resource pooling for pension programs. Presumably, automation will also facilitate the SIAs' gradual takeover from enterprises of the administration of the retirement pension programs. Similarly, the Ministry of Labor has announced its support for the general application of computer technology to the management of social security, including the development of a networking capability between local SIAs and a newly established information retrieval center at the Ministry in Beijing. Moreover, the State Bureau of Technological Assessment (*Guojia Jishu Jianduju*) has approved the issuance of social security numbers to workers beginning in April 1990, another step toward facilitating administrative control of social security programs.[37] Mindful of the inadequacy in the existing institutional setup for asserting centralized control over social security administration, the Ministry of Labor has proposed the creation of a separate agency under its auspices at the central government level. It is not clear, though, whether this agency will have its own subordinate branches and subbranches throughout the country.[38]

There are even indications that the central government at last is poised to revise the existing regulations for the retirement pension and work-injury programs. Details are not yet available. The government's intention seems to reassure workers that the established benefit levels will at least continue, if not be improved. Permanent workers in state enterprises, however, may be expected to contribute to the funding of the retirement program. This would represent a major breakthrough for making workers responsible for part of the costs. There is no sign of reforming the medical care program or of revising the much-abused practice of paid sick leave for extended periods, however.[39]

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[36] "Sichuansheng zhigong dabin yiliaofei tongchou shidian shouhuanying (Experiments in resource pooling for catastrophic medical care expenditures in Sichuan Province are well received)," *ZLB* 28 March 1990, 2; "Lituixiu zhigong yilaio feiyong shehuitongchou yibi (A look at resource pooling of medical expenditures for retirees)," *ZLB* 14 October 1989, 4; G. Li and Z. Zhang, "Jianli juyou zhongguo tese de gongshang shehui baoxian zhidu (To establish a social insurance system with Chinese characteristics for workers' compensation)," *ZLK* (June 1990): 17-8; X. Zheng, 19–21.

[37] For examples, see "Chengdushi shehuibaoxian jigou shixing jisuanjiwanglou guanli chuju guimo (Chengdu city social insurance agency's implementation of computerized management takes shape)," *ZLK* (June 1990): 47; "Laodongbu jiu jisuanji guanli tuixiu yanglao baoxianjijin tichu juti yaoqiu (Ministry of Labor announces requirements for computerized management of retirement pension funds)," *ZLB* 7 October 1989, 1; Y. Liao, "Woguo shishi shehui baozhang haoma zhidu (China implements social security enumeration system)," *Liaowang* no. 24 (1990): 19–20. The report does not indicate which agency is assigning these numbers or how the adoption of the social security enumeration system is expected to improve the administration of these programs. The author admits that the effective application of the system depends mostly on the pace of automation. At present, individual enterprises keep their own files on employees and retirees manually, and they do not follow any standard procedures or numbering system.

[38] This was proposed by the Director of the Department of Social Insurance and Welfare. See, L. Han, "Nuli," 10–1. In late 1988, a State Taxation Administration was established as an independent agency with direct authority over provincial, municipal and county branches. Former Minister of Labor Luo Gan envisioned the resource pooling of retirement pensions at the national level, with a unified system for budgeting, accounting, and auditing. "Renzhen zhili, zhendun, jiji wentoudi tuijin laodong, gongzi, baoxian zhidu gaige (To seriously manage and rectify reforms in labor, wages and insurance systems and to promote them actively but at a steady pace)," *ZLK* (January 1989): 3–9.

All these developments seem to follow the general trend of spreading risk-sharing among enterprises and shifting administration of the retirement programs to local governments, instead of depending on individual enterprises for funding and administration. Significant as these developments are in the long-term evolution of a social security system suited for a market-oriented economy, short-term necessities have led to expedient practices that might blunt, if not subvert, this general trend—in particular, practices that reinforce employee dependency on enterprises for their social and economic well-being, or make government funding readily available for social security payments.

As layoffs in late 1989 created resentment among those who became unemployed, the government decided to retain workers in factories at reduced pay in order to avert social disorder. In a January 1990 speech, Premier Li Peng specifically lauded the enterprise's function as a "mini-welfare state," responding to workers' social and economic needs.[40] Thus, the practice of the enterprise's functioning as a "mini-welfare state" has regained official sanction. Efforts to lessen workers' dependence on enterprises in order to facilitate labor mobility appear to have taken a back seat to concerns over social stability.

When the general economic downturn in late 1989 and early 1990 caused two-thirds of urban factories to shut down or operate at a reduced capacity, it also exposed the weak financial base of resource pooling in the permanent workers' retirement pension programs that are funded on a pay-as-you-go basis. Dipping into the reserve funds for contract workers has helped to alleviate the shortfall somewhat. But these reserve funds can be easily exhausted given the large number of retirees and the relatively small number of contract workers contributing into the funds. Information is not available regarding the extent to which retirees have been paid during this period of economic hardship nationwide. Some local governments have issued directives that retirees be paid in full regardless of financial status of their former employers (that is, regardless of an enterprise's ability to contribute to pension pools). They have also offered government funding to make up for enterprise shortfalls.[41] It is likely that local and possibly central

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[39] J. Zhang, "Dui qiye yanglao baoxian zhidu gaige de rogan sikao (Considerations on reforming the enterprise old-age insurance system)," *Jingji Cankao* 14 August 1990, 4 (Mr. Zhang is the director of the Office of Retirement, Department of Social Insurance and Welfare, Ministry of Labor); C. Gu, "Insurance," 1; C. Gu, "Pension System to Undergo Overhaul," *JPRS-CAR-90-040* 29 May 1990, 56; J. Wen, "Reform of worker's insurance under way," *China Daily* 5 September 1989, 1; G. Li and Z. Zhang, 17–8; X. Zheng, 19-21; and "Zhongguo laodong fazhi jianshe ji qushi (The establishment and trends in labor legislation in China)," *ZLK* (March 1990): 3–5. This last reference specifically mentions retirement pension and workers' compensation as among several pieces of legislative proposals already submitted to the State Council for review; labor insurance regulations that stipulate cash benefits for sickness and maternity and medical care are not included.

[40] See P. Li, "Gaige kaifang yao yenzhe jiankangde guidao qianjin (Reform and open policy must march along healthful tracks)," *Guowuyuan Gongbao* no. 4 (1990): 99–106. In the same speech, Premier Li Peng also supported a labor insurance system financed by contributions from employees, employers, and the government, see ibid, 105.

[41] U.S. Central Intelligence Agency, "The Chinese Economy." In Guangzhou city, for example, the government directive instructed the full payment of retirement pensions to beneficiaries of hardship enterprises, and promised making up for shortfalls. Guangzhoushi shehuibaoxian jigou

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government funds have been tapped as a last resort to pay retirement pensions.

It remains to be seen whether this practice of government subsidies to make up enterprise shortfalls is merely a stopgap measure, or whether it will evolve into a routine procedure as during prereform days. The pooling mechanism evolved in the last decade would then become one of channeling local and central government funding to retirement pension payments (or even to medical care and workers' compensation), rather than bona fide pooling of contributions from enterprises.[42]

Recent central and local government measures and proposals have only addressed issues related to developing resources to fund social security (for example, employee contributions to social security, and resource pooling for medical care and work injury programs). No proposals have been put forward to control rapidly rising expenditures. This approach follows the central government's tendency to raise rather than lower benefit levels as evidenced in the 1980s, and probably is also prompted by the current climate of appeasing workers to maintain social stability.[43]

B. IMPLICATIONS FOR TRANSITION TO A MARKET-ORIENTED ECONOMY

During the 1980s, the central government enhanced the social security programs designed in a bygone era and made them the operative programs of today. Only limited progress has been made to adjust social security to a market economy. Both the newly established contract workers' retirement pension program and unemployment insurance program are yet to withstand the test of time. At present, state-sector permanent workers still do not contribute to the funding of social security programs; and they remain tied to their enterprises for receiving social security benefits. As long as resource pooling (for both permanent and contract workers) is limited to retirement pensions at the city/county level, and as long as city and county SIAs operate primarily as clearinghouses for funding rather than administrators of social security programs, the prospect for labor mobility across enterprises even within the jurisdiction of the same city or county will be remote.[44] More important, the central government has yet to set up any government-regulated income security programs for workers in urban collective and private sectors, even though such programs would make these

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caiqu liudian yingji chuoshi (Guangzhou city social insurance agency adopts six-point emergency measures)," *ZLK* (April 1990): 47.

[42] An alternative route to city and county government funding for enterprise shortfalls and central government subsidies for a specific local pension fund would be expanding the base of pooling to the provincial or even national level. If necessary, the central government would make up the deficit for the national fund, raise contribution rates by enterprises and/or employees, or reduce benefit expenditures. However, it may take years to develop provincial or national pooling because each city or county has negotiated (with local enterprises) its own standards of enterprise contribution rate, retiree benefit level, and various subsidies included in the pension payment. These differences are not easily harmonized.

[43] A related question, given the present economic hardship, is whether the government still considers it appropriate to make workers themselves contribute to social security funding as planned and, if so, whether workers will be compensated with higher wages to cushion the blow.

[44] Employees also depend on their enterprises for housing and many cash and in-kind allowances in addition to social security provisions. Of the reported total nonwage compensation items, the non-social security portion has been about 28 percent of the total during years 1978–88; the social security portion, 72 percent. See note 4 above.

sectors more attractive to new entrants to the urban labor force so not to overload the state sector.[45]

Meanwhile, the skyrocketing cost of providing social security to state-sector employees—a relatively small group of the country's labor force—and its drain on the financial health of enterprises and of the state, is expected to have an adverse impact on the country's national economy. The cost issue will become especially acute as China's population ages and as some 40 percent of its current urban workers retire within the next 20 years. It is estimated that the ratio of employed urban workers to retirees will worsen from 6.4:1 in 1988 to 4:1 by the year 2000. During the same period China's resources will also be needed for investment in economic development and to meet the vast social and economic demands of the rapidly aging rural population who at present must rely on their own resources or family members for support.[46]

C. REMAINING POLICY ISSUES

How the government will resolve this dilemma of allocating China's resources among contending population groups and between social versus economic priorities remains the key social security policy issue. The government might begin with reviewing policy alternatives for state-sector social security programs. A continuation of the current arrangements—that is, reliance on local governments and enterprises to initiate "experiments" conducive to the transition to a market-oriented economy—will probably exacerbate ongoing problems of waste and abuse, and will perpetuate the workers' perception that the social security programs are unreliable.

Should the central government, then, begin to assert leadership in social security policy, as it has begun to recentralize management of state enterprises, prices and investment? If so, it may choose to follow the 1980s policy of adhering to the existing programs, all the while expecting that tightened supervision and control from the center will curb waste and abuse. By taking this approach, the government will be putting an end to a decade of local cost-control "experiments," especially in medical care. Besides, given both the lack of an institutional framework for central supervision and control in social security matters, as well as the limited administrative experience of SIAs and LSCs in cities and counties, the savings that can be achieved through regulating administrative procedures, even with the help of computer technology, may be too little and too late to significantly diminish the heavy financial burden in social security over the next two decades.

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[45] This is not to overlook that about two-thirds of urban collective workers are reported as having access to some income-security programs which depend mostly on the collective's financial solvency. In addition, the People's Insurance Company of China has begun to offer voluntary retirement plans for collective and private sector employees since mid-1980s. None of these programs can compare with the scope and generosity of state-sector plans. At year-end 1988, 99.8 million workers were employed in the state sector, 35.3 million in urban collectives, and 6.6 million in the private sector. *TJNJ, 1989*, 101.

[46] According to one Chinese analyst, the total cost of the benefit package for state-sector employees and retirees, including the reported total of nonwage compensation items (that is, social security, and cash and in-kind allowances), plus unaccounted subsidies (such as housing, fuel, personal use of government vehicles) amounted to 129.6 billion yuan in 1988, or 9.2 percent of China's gross national product for the same year. W. Han, "Sherufenpei," 14; *TJNJ* , 1989, 17.

S. Zheng and C. Chen, "Zhongguo xianxin shehui baozhang zhidude chulu (A way out for the existing social security system in China)," *Shehui* (February 1990): 6–8; and C. Gu,"Pension System to Undergo Overhaul," *China Daily* 10 August 1990, 1, reprinted in *JPRS-CAR-90-040*, 56. The worker/retiree ratios are based on total urban workers and retirees; the 1988 worker/retiree ratio for the state sector was 6.5:1. *TJNJ, 1989*, 101 and 152.

J. Banister estimates that given the current population policy and restrictions on rural migration to cities, "the proportion of the rural population ages 65 and above would rise from 6 percent in 1990 to 7 percent in the year 2000, 13 percent in 2030, 19 percent in 2040. . . ." In comparison, "the proportion of urban population ages 65 and above would increase from 5 percent in 1990 to 8 percent in the year 2000, 27 percent in 2030, 33 percent in 2040. . . ." See J. Banister, "The Aging of China's Urban and Rural Populations," paper presented at the International Academic Conference on China's Population Aging, Beijing, December 1989, 10-1.

As an alternative, will the central government decide to reexamine the existing programs and initiate cost-cutting measures as national policy? Will the government overcome its overriding concern for social stability and roll back privileges that state-sector employees and retirees have grown accustomed to expect, especially just after it raised their wages for the purpose of mollifying discontent? Even if that is the direction it takes, to what extent can the central government expect or enforce compliance from enterprise administration?

In sum, at the onset of 1990s, China's leadership faces two policy alternatives. Neither promises easy answers. First, it may continue to use the existing social security system (destabilized as it is) to placate state-sector workers who are disheartened by recent political and economic policies. This will probably drain the country's resources at the expense of meeting the needs of a vast working population outside the state sector, and of further economic development. The second policy alternative is for the central government to decisively control social security costs by modifying existing program provisions and instilling discipline in administration. Meanwhile, it can hold out the hope that an improved economic outlook as the country deepens its economic reforms will help alleviate restlessness among its workers.

CHINA'S ENVIRONMENT; ISSUES AND ECONOMIC IMPLICATIONS [1]

By Baruch Boxer *

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SUMMARY

We know a good deal about the extent of China's environmental problems, but little about how to measure their economic impacts. Attempts in recent years to introduce innovative, market-based regulatory programs have resulted from increased foreign investment and the activities of multilateral development agencies. These activities, however, are focused on individual industries, enterprises, municipalities, and provinces. Prospects are reasonably good for development of innovative economic strategies to strengthen existing administrative enforcement measures in a few places, like Beijing and Shanghai, where a great deal of money is being invested, and foreign expertise is available. It is unlikely, however, that the central government in the early 1990s has the expertise or will to implement a national program that can respond satisfactorily to China's unique problems of size, physical diversity, resource imbalance, and population concentration. Despite early recognition of the inevitable environmental cost of pursuing the Stalinist development model, China's leaders made their choice, and still continue to live with the consequences.

I. INTRODUCTION: CATEGORIZATION AND INTERPRETATION

Environmental problems in China seriously threaten 1990s economic modernization plans. Technological remedies and regulatory

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controls at national and provincial levels are generally weak and ineffective despite a constitutional guarantee of environmental protection as a "national principle." Economic productivity suffers from pollution and resource degradation in industry, agriculture, fisheries, animal husbandry, forestry, energy, and other sectors. Problems include rural and urban air and water pollution; arable land encroachment, conversion, and reclamation; soil erosion and fertility loss; deforestation; and health effects of random disposal of municipal garbage and hazardous wastes. In some respects, factors contributing to China's poor environmental condition resemble those in other developing countries. Population pressure overwhelms natural systems' ability to remain productive in the face of pollution insults and physical degradation. Ecosystem processes which support food production, waste assimilation, watershed and aquifer recharge, and other functions essential to human welfare are undermined.

Having recognized this there are major difficulties in moving from description of problems to analysis of their significance. How should economic and other policy aspects of China's environmental situation be assessed? Against what standard? At what scale? Do China's domestic environmental problems have international or global dimensions? Understanding environmental change requires that local events and processes be interpreted in relation to wider economic and social impacts. This facilitates cross-national and regional comparison of problems and remedies.

Analyzing economic implications of environmental issues is made difficult by the tendency in recent years to dwell primarily on the extent and magnitude of China's problems. Many accounts tell of polluted water supplies, foul rivers, degraded natural habitats, choking urban air pollution, and other examples of environmental abuse. [2] Problems frequently are put in the worst light by domestic and foreign observers who draw heavily upon dubious official aggregated data on pollution and resource degradation. This deters attempts to look realistically at economic factors in environmental policymaking. Benefits and costs of environmental protection can be considered at several scales, in various time frames, and in relation to a host of ecological and health considerations. Environmental concerns influence in investment decisions, trade patterns, industrial standards, pricing strategies, and management goals in many ways.

In each case, however, there is much uncertainty regarding economic risks and benefits of environmental regulation and investment, and the costs of neglect to people and the environment. Unresolved issues in the long-term debate over clean air legislation in the United States point up the extent of uncertainties even in countries with strong, long-standing commitment to finding economically equitable solutions to problems like air pollution. [3] Formal analysis in China of economic factors to be considered in managing air pollution or any other environmental problem has barely begun.

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[2] Vaclav Smil, *The Bad Earth* (Armonk, N.Y.: M.E. Sharpe, Incl, 1984).

[3] Peter Passell, "What Price Cleaner Air," *The New York Times*, August 15, 1990, p. D2.

Economically significant issues with environmental ramifications include toxic waste import and recycling, market factors in pollution control equipment import and export, the effects on industrial development of weakened central environmental and land use regulations in southeast coastal provinces and special economic zones, and factors affecting choice of industrial pollution control standards by line ministries and government agencies. Until now, foreign observers of China's environment have mainly described problems. Comprehensive analysis has focused primarily on the politics of agenda-setting, interpretation of laws and regulations, and problems of policy implementation.[4]

Writers on China's environment, moreover, have only begun to explore the connections between domestic and international policy. Global concerns like climate change, biodiversity, soil loss, and deforestation that currently command the greatest international attention are slow to emerge and are unconstrained by national boundaries. They mainly reflect developed country perspectives. China has actively participated in multilateral negotiations on chlorofluorocarbon reduction to protect stratospheric ozone. Here, as in other multilateral discussions of global environmental issues, however, technical questions of appropriate standards, chemical substitutes, legal precedents, and financial risk-benefit delimit the scope of debate on remedial options.

International demands for domestic policy shifts to address global problems like climate change often are unrealistic in light of national conditions. for example, pressure on China to improve energy efficiency and reduce coal use underestimates difficulties of finding politically and economically acceptable alternatives. Problems include dependency on cheap coal and unwillingness or inability of technical and financial institutions in China to support alternative energy and conservation programs like centralized heating systems for cities. It is assumed by foreigners that information availability, technology and capital transfer, and management assistance are sufficient to bring China into line with international environmental norms.[5] This is questionable. A range of potential climate change phenomena (e.g., sea level rise, temperature migration, spatial shifts in biological productivity, increased ultraviolet radiation) could affect domestic economic performance in unknown ways. There has been little study in China (or elsewhere) of relations between economic and environmental impacts of domestic climate change scenarios.

Another problem facing analysts is that oversimplified environmental quality measures are frequently used to compare China with other regions, countries, and to global norms.[6] These indices are often expressed in per capita units. Per capita data are used in many areas including national resource accounting,[7] pollutant discharge levels, water resources infrastructure and quality, energy utilization, land management, and resource endowment. Simple comparisons, however, tell us very little about how it to interpret the economic or human significance of China's rapidly deteriorating environment, especially since information overload and self-serving report by competing bureaucracies often confuse the picture.[8]

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[4] Lester Ross, *Environmental Policy in China*, (Bloomington: Indiana University Press, 1988).

[5] William A. Nitze, "A Proposed Structure for an International Convention on Climate Change, *Science*, 10 August 1990, pp. 606–608.

[6] Qu Geping, "Shijie huanjng wenti de xin fazhan ji wo gwo de duice" [China's Countermeasures to Newly Developing Global Environmental Problems], *Zhongguo uanjing kexue* [China Environmental Science], 1989, 3, pp. 163–168.

[7] Robert Repetto, "Wasting Assets, The Need For National Resource Accounting," *Technology Review*, January, 1990, 39–44.

Problem characterization (e.g., "ecological environment," industrial pollution, hazardous waste, etc.) and reports on enforcement pursue well-trodden paths that are either strewn with superficial observations or prejudices of local and foreign critics, or glowingly hortatory and self-serving in the best tradition of Party obfuscation.[9] Seldom are there attempts to frame problems in analytical terms conducive to estimation of the technical or financial feasibility of regulatory or technical management options.

How will environmental constraints affect China's economic modernization? This paper briefly reviews historical and institutional factors, surveys several key problem areas, and concludes with comments on economic implications of policy choices. My purpose is to point up some difficulties in understanding and applying economic factors in assessment of China's environmental experience.

II. Background and Context

Several factors influence how environment and resource issues have come to be seen, priorities determined, and technical and policy responses framed. Foremost among these are China's size, population, physical and climatic variability, unevenly distributed resource base, and the contributions of environmental science and administrative work through the 1980s. Since the founding of the PRC in 1949, environment and resource questions have been prominent in theoretical discussions of nature-society relations and in debates over how best to deal with the historical legacy of environmental deterioration. This was best exemplified in the 1950s by the prominence given water conservation. There was great urgency in seeking technical and institutional remedies for controlling physical and human impacts of flooding, soil loss, and drought.[10]

Government and Party have since the late 1960s sought to enhance public awareness of pollution, conservation, and environmental health. This is no small achievement, given economic policy shifts, 1980s decentralization of economic decision-making, changing center-local relations, and the daunting challenge of governing a poor country of China's size and regional diversity. Before the 1960s, environment-related work was tied to public health and sanitation [*huanjing weisheng*]. These efforts, while an important early affirmation of government and party concern for public welfare, focused mainly on recycling of household garbage and other nontoxic urban and agricultural wastes, and with sanitary engineering and domestic water supply. Until the 1960s, few institutional or technical measures were taken to deal with burgeoning health and environmental impacts of industry, agriculture, urbanization, and energy development.

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[8] For example, conceptual and statistical problems of interpreting conflicting data on land and water factors in irrigation management are examined in James E. Nickum, Volatile Waters: Is China's Irrigation in Decline?" In *Agricultural Reform and Development in China*, T. C. Tso. (ed.), (Beltsville, MD: IDEALS, 1990), pp. 284–296.

[9] Daniel Southerland, "China's Industrial Pollution Posing Severe Health Hazards," *The Washington Post*, August 12, 1990, p. A18. Song Jian, "Xiang huanjing wuran xuanzhan" Carry on the War Against Environmental Pollution], *Huanjing baohu* [Environmental Protection], 1989, 7, pp. 2–7.

[10] Tao Shuzeng, *Tao Shuzeng zhishui yanlun ji* [Collection of Tao Shuzeng's Speeches on Water Management] (Hubei: Keji, 1983).

In the late 1960s and early 1970s, with the strong encouragement of Zhou Enlai, an institutional base for environmental protection was established, and monitoring and regulatory strategies specific to China's needs were formulated. China embarked on a two-fold environmental initiative. In a national program laid out at an August 1973 conference, problems, goals, and implementing strategies were specified. Initial government efforts were backed by ideological principles which promoted pollution control and resource conservation as economically beneficial. Raw materials were to be conserved, industrial processes improved through materials recycling and residuals recovery, and natural productivity sustained."

Social productive forces," presumably emerging from the synergism of nature and society, were to be maximized to assure the well-being of present and future generations. Theoretically, control over nature leads to more "rational" and efficient use of natural resources, and pollution and waste is reduced. In areas as diverse as desert management and fisheries genetics, impressive scientific efforts were made to probe physical and biological aspects of the interaction between people and nature. The aim was to sustain the productivity of natural systems, thereby minimizing harmful effects of economic development on people and the environment.[11]

From the early 1970s through the 1980s, China promulgated wide-ranging environmental laws, regulations, and standards, supported extensive scientific and technical research and monitoring programs through government agencies, line ministries, and educational institutions, and mounted numerous educational and propaganda campaigns in support of environmental protection. Several principles underlie environmental protection in China: as national policy it should guide social and economic development, provide economic incentives and administrative oversight to prevent and reduce pollution, and combine enforcement of regulations with technology and infrastructure improvement for pollution control.[12] Despite a continuous outpouring of laws and regulations since the late 1970s, however, enforcement is weak and uneven.[13]

There are contradictions between local needs and national directives and standards. On the resource side, localities must feed more people in the face of shrinking land resources. Sichuan's population, for example, is over 100 million. Provincial land use regulations of the 1980s prohibit cultivation on mountain slopes steeper than 20 degrees, but land shortage and population pressure in hilly areas throughout the province make a mockery of these standards. Intensive planting on 40 degree or greater slopes is common, leading to soil erosion, landslides, and rapid reservoir sedimentation.[14] National industrial pollutant discharge guidelines are similarly undermined in many situations where local production needs take precedence over national environmental goals. Chongqing University officials, for example, have for over a decade unsuccessfully appealed to municipal and national agencies to force several polluting industries located below the University along the Changjiang (Yangtze River) to reduce toxic emissions affecting the health of students and faculty.[15] In rapidly developing coastal cities and provinces, moreover, pollution regulations are increasingly ignored.[16]

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[11] Baruch Boxer, "Environmental Research in China: Achievements and Challenges," *China Exchange News*, 15, 2 (June 1987), pp. 7–11.

[12] Li Ping, "Environmental Protection in China," *Beijing Review*, 33, 29 (July 16–22, 1990), pp. 18–22.

[13] Lester Ross, *op. cit.*, pp. 172–175.

The 1970s efforts were distinctive in several respects. They strengthened links between ideology and institution-building both in bureaucratic and scientific and technical realms. In the late 1960s and during the 1970s, pollution control was promoted as broadly supportive of conservation and resource recovery. Health and environmental benefits of point-source control were emphasized along with wider national benefits of resource conservation and nature protection. Mid-1970s appeals for improved "three-waste" (liquid, solid, gaseous) recovery were thus couched in terms of the macroeconomic benefits of integrating environmental protection and development. Much original research was done on regulatory and administrative strategies for maintaining environmental quality while pursuing development goals. A distinctively Chinese approach to environmental protection emerged. Efforts of national research and regulatory agencies were also coordinated with provincial and municipal agencies and activities.[17]

Research and policy development was regionally focused with respect to specific problems. Academy of Sciences institutes and universities took the lead in making research findings available to regulatory agencies that carried out monitoring and enforcement. In Dalian, for example, the Institute of Chemical Physics coordinated industrial pollution monitoring and control studies with provincial and municipal line agencies in the northeast and the Beijing-Tianjin region; the Beijing Institute of Geography took the lead in sophisticated studies of relations between land source and marine pollution in Bo Hai Bay; the desert research institute in Lanzhou coordinated desert control studies and programs with provincial agencies in the northwest; and Academy of Sciences, provincial, and State Oceanic Administration fisheries research institutes in Guangdong and Fujian coordinated their work with researchers in Zhongshan and other universities to control effects of land source pollution on coastal marine fisheries.

China also participated in the 1972 Stockholm U.N. Conference on the Human Environment. She asserted herself as a major participant in emerging international discussions of global environmental issues, especially issues like "pollution export," which served to solidify China's identification with Third World interests in North-South debates on pollution causes and remedies. Poor countries blamed industrialized countries for causing pollution and resource destruction through their own development and exploitation of resources in developing countries. Poor countries equated pollution with poverty, and maintained that environmental problems could only be solved with technical and economic support from rich countries to assist their development. China was an outspoken advocate of this position throughout the 1970s.

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[14] Personal communication, Prof. Gu Hengyue, Chongqing University, June, 1988.

[15] Personal communication, University officials, Chongqing University, June 1988.

[16] Daniel Southerland, *op. cit.* See below for further discussion of the situation in the Southeast.

[17] Qu Geping, "Environmental Protection in China: A Brief History," *Chinese Geography and Environment*, Vol. 2, 3 (Fall, 1989), pp. 3–29.

Yet in China it is especially difficult to establish criteria for weighing the costs of doing nothing or something about environmental problems. While problems are interconnected in China as elsewhere, the China case poses special challenges beyond those of size, physical constraints and population pressure on resources. For instance, there is no tradition, as in the West, of neoclassical cost-benefit analysis to test assumptions about how to value natural resources in relation to short or long-term human welfare goals. Nor is there sensitivity to the time value (discount rate) of investment in environmental infrastructure or nature conservation in weighing present versus future environmental and health benefits and costs. Capital investment decisions are the product of a complex system where rivalry among territorial units and bureaucracies and competition among high level agencies for investment funds determines project priority. Most important, cost-benefit concerns seldom enter into the planning process, and capital is not valued as a commodity.[18]

China has for over 20 years forged its own perspectives on what its environmental problems are and how they should be thought about and managed. While it is easy for outsiders to criticize perceived shortcomings in policy development and enforcement, no other poor country has developed a more extensive institutional, research, and educational base for environmental programs. What should be expected of China, given the spotty record of Western countries, including the United States? Why should China be held to a higher standards?

III. Major Environmental Challenges

Impacts of environmental problems are made worse in China by economic policies that since 1949 give highest priority to industrial and agricultural production. Legal and regulatory directives in recent years to foster environmental sensitivity in the selection of project sites and in their operation have been only partially effective.[19]

Construction of large water, industrial, agricultural, and energy projects like dams and storage reservoirs, irrigation schemes, thermal and nuclear power plants, mines, petrochemical complexes, and steel mills have devastating effects. They severely damage forest, grassland, mountain, freshwater, marine, and other ecosystems. Growth policies thus contradict and call into question the sincerity of official pronouncements on the need to balance economic growth and environmental conservation. These contradictions reflect the challenges and unique circumstances of various problem areas. Water pollution, energy/environment issues, and waste management are illustrative.

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[18] David M. Lampton, "Water Politics and Economic Change in China," *China's Economy Looks Toward the Year 2000*, Vol. I, The Four Modernizations. Selected Papers Submitted to the Joint Economic Committee, Congress of the United States, May 21, 1986 (Washington: U.S. Government Printing Office, 1986).

[19] Li Ping, *op. cit.*; Vanessa Lide, "The Perils of Pollution," *The China Business Review*, July-August, 1990, pp. 32-37; for a somewhat more optimistic view on legal enforcement potential see Lester Ross et al., "Cracking Down on Polluters," *The China Business Review*. July-August, 1990, pp. 38-43.

A. WATER

Water pollution is China's most pressing environmental problem because of its widespread, direct impact on human health and natural productivity. Water pollution results from interrelated natural and human causes. These include severe water shortages in the north and in some southern coastal areas. China's annual surface water runoff volume of 264 million m^3 is the world's sixth largest, but uneven distribution of ground and surface water, as well as erratic precipitation patterns, results in regional shortages and difficulties in maintaining timely water availability for agriculture and industry. The Changjiang (Yangtze) Basin, and areas to the south and southwest, for example, have only 33 percent of China's total cultivated land, but nearly 70 percent of the country's water resources. Over the years, there have been many proposed schemes for transferring water from south to north. Ecological and health implications of these schemes have been studied, but debates have mainly centered on costs and engineering feasibility.[20]

Excessive "mining" of groundwater and loss of surface water through poor construction and maintenance of storage facilities contributes to water shortages. Other causes include industrial waste discharge and modification and reclamation of lakes and fresh water and coastal wetlands for urban, industrial, and agricultural development. This leads to species loss, polluted drinking water, aquifer contamination from salt water intrusion, and estuarine siltation. Pressure on rural water supply and deteriorating water quality also results from high agricultural chemical use, poor drainage, and the recent explosive growth of rural industries, especially in southeast coastal areas. In 1987, there were approximately 15 million rural enterprises for building materials, food processing, textile and chemical manufacturing, and other light industry activities. They employ about 80 million people. Few enterprises can treat wastewater, and it is mostly discharged untreated into rural waterways.

Good water supply and management have been crucial to China's economic success since ancient times. Economic activity in China has centered on roughly 5000 river basins with watersheds greater than 100 sq. km. River basins defined China spatially and socially, and focused defense, food supply, marketing, water conservancy, transport, and other key economic activities. These basins still are basic support systems of the national economy because rivers and streams provide surface water, restore groundwater, and collect and disperse wastes. They also serve as the physical base for construction of flood control, irrigation, storage, and power generating works. A major reason for current widespread water pollution is that natural functions have been undermined through failure to adapt traditional knowledge and practice to modern requirements, as has been done in France, the Netherlands, and other Western European countries.

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[20] "Diversion of Project Gets a Blueprint," *Beijing Review*, 33, 37 (September 10-16, 1990), p. 11.

Recent official views on water supply and pollution emphasize conservation and more effective water reutilization to compensate for inadequate natural supply.[21] Other policy remedies have called for greater attention to demand (economic), rather than supply (engineering) approaches to water management. Price reforms to remove subsidies and foster conservation have not been introduced to any substantial degree, however, although there has been much talk of the need for reforms. Water is priced so low that there are few economic incentives to conserve or reuse water industry and agriculture. Competition for capital investment funds for water projects among political jurisdictions has also hindered attempts to price water more realistically to foster conservation.[22]

Reduction of industrial water pollution, which makes up 70-80 percent of China's total wastewater load, is a top government priority. There has been some success in combining waste reduction, biological treatment, and process modification in smaller installations, and many new factories are required to install pollution control devices. There is little consistency from province to province, however, in use of technical controls or enforcement of discharge standards. Nationally, industrial waste discharge remains the most serious sources of contamination of drinking water crops, and fish and shellfish resources.

Total wastewater discharge in China in 1988 was estimated at roughly 40 billion m^3. Aggregate supply and demand statistics, however, are not very useful for policy planning except as they can help to clarify specific problems and needs of agriculture, industry, and households. These estimates require confidence in data accuracy, and in assumptions underlying statistical analysis of supply and demand factors affecting water quality, price and the availability of water for various purposes. Date, unfortunately, are notoriously unreliable. There are frequent discrepancies between official sources in reporting wastewater discharge levels.[23] In consistent and excessive data from several agencies with overlapping jurisdictions also reflects poor reporting and interpretation of monitoring results. The National Environmental Protection Agency (NEPA) is unable to coordinate policies and assessments on a national scale. This not surprising, in that NEPA has limited authority and staff (about 300) to implement technical programs. Implementation and enforcement responsibilities mainly rest with bureaus in line ministries and with thinly-staffed provincial and lower-level environmental units.

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[21] Ye Yongyi, "Tigao shuili jianshe jingji xiaoyi de tujing" (Improve Prospects for Economic Efficiency in Water Resources Development), *Kexue yanjiu lunwen ji, Shui ziyuan* (Collection of Scientific Research Papers. Water Resources) (Beijing: Shuili dianli 1983), No. 14, pp. 170-178; Chen Shangkui, "Woguo shuili shiye chengji zhuozhu" (Our Nation's Outstanding Achievements in Water Management), *Dilki Zhishi* (Geographical Knowledge), 4, 1990, 3.

[22] David M. Klampton, *op. cit.*, pp. 387-406.

[23] Final Report of the International Workshop on the Control of Environmental Pollution in China, 12-18 February 1990, Beijing. Prepared for the United Nations Development Program and the State Science and Technology Council (sic) by Richard A. Carpenter, Environment and Policy Institute, East-West Center, p. 12 (henceforth, *Final Report*); Li Ping, *op. cit.*, p. 22.

Industrial discharge also contributes to the recent sharp decline of fresh water resources in China. Mid–1980s studies indicate that over a quarter of fresh water in lakes, rivers and aquifers is polluted, and water quality is declining rapidly. Already, nearly 25 percent of water flowing in 53,000 km of rivers is unsuitable for irrigation or domestic use, and 86 percent of river water flowing through urban areas is too polluted for irrigation or aquaculture. Surveys of groundwater quality in 47 cities revealed that 43 of them were dependent on groundwater containing toxic contaminants at levels exceeding state water quality standards.

The ubiquity of water pollution challenges national, provincial, and local governments to control individual pollution sources and to coordinate efforts among sectors. Although, on paper, environmental bureaucracies are vertically linked from national to local levels to facilitate research, information exchange, monitoring, and enforcement, for achieving significant reduction of water pollution and improvement control for the nation as a whole are poor.

A major problem is that officials responsible for water pollution in environmental protection, agriculture, urban construction, planning, and water development agencies seldom interact. Environmental agencies are marginalized by politically powerful line ministries, and find it increasingly difficult to enforce laws and regulations through administrative, legal, or economic means. Agency fragmentation and poor coordination hinders policy implementation. For example, a high-level workshop on pollution in China, sponsored by the State Science and Technology Commission and the United Nations Development Program, was held in February, 1990. The workshop report noted that Ministry of Health experts on environmental health were not in attendance. This was seen as seriously weakening prospects for implementing workshop recommendations to improve institutional response to the health effects of water pollution.[24]

B. ENERGY

China is amply endowed with coal (the world's second largest reserves), there is underutilized hydropower potential, and many thermal and nuclear electric generating plants, with associated power grids, are being built throughout the country.[25] In aggregate terms, energy supply from various sources appears adequate for development needs in the 1990s, despite the current financial crisis in the petroleum industry which supplies about 18 percent of China's energy. By comparison, coal provides 76 percent of the country's industrial energy, hydropower 5 percent, and natural gas 2 percent. Problems in the oil industry stem from unrealistic underpricing (now about U.S. $2.00/barrel, compared with a 1980 price U.S. of $9.00), a problem shared with other state-subsidized energy sectors. State oil companies are also reticent to allow foreign oil companies to engage in onshore exploration and production, offshore production is not at anticipated levels despite heavy investment over the past decade, and there is a continuing need to export about 400,000 barrels of oil a day to earn scarce foreign exchange.[26]

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[24] *Final Report*, p. 8.

[25] ref to Fridley chapter, "China's Energy Outlook."

Energy and environmental issues are closely related, but it is difficult to define cost-effective strategies for remedying existing environmental problems and avoiding new ones. The problem is that national energy planning and policy development are not considering energy production impacts on health and the environment. China by necessity will increase its reliance on coal as primary energy source, thereby intensifying already serious air pollution. This will occur even if more flue gas desulphurizing devices ("scrubbers") can be installed in large industries, a doubtful prospect in the presently constrained fiscal climate.

A major reason for mounting energy-related environmental problems is wasteful use of coal to generate electricity that is carried over power grids to grossly inefficient heavy industries. Heavy industry consumes roughly 65 percent of power generated nationally. But China's steel industry uses more than twice as much energy to produce a ton of steel as producers in Western countries or Japan.[27] Energy shortages occur because of both regional imbalance in availability of coal and other energy resources, and poor interregional transportation. The country relies too heavily on centrally distributed power linked to urban and industrial centers, with rural areas undersupplied. More efficient use of existing energy sources, especially hydropower, would better satisfy local needs with reduced environmental costs, and there would be less need for large generating plants.

Although China's coal is generally of good quality, with relatively low sulfur and ash content, high consumption levels and inefficient combustion in industry and households (cooking briquets) results in harmful levels of suspended particulates, sulphur dioxide (SO_2), and carbon monoxide (CO). Pollutant loadings in most urban areas exceed state standards and, especially in northern cities, contribute to high incidence of respiratory disease. Uncontrolled motor vehicle emissions, a growing, but unaddressed problem, aggravates air pollution in urban airsheds. Source breakdown of total suspended particulates and SO_2 from coal combustion is approximately: industry 43 percent; domestic use, 23 percent; thermal power generation, 24 percent; coking plants, 8 percent; and locomotives, 3 percent.[28]

Acid precipitation affects many areas of China including the Chongquing-Yibin area in Sichuan, Guiyang in Guizhou Province, the Liuzhao area of Guangxi Zhuang Autonomous Region, parts of Hunan, Guangzhou.[29] There is superficial evidence of damage to crops, trees, and fresh water bodies, but there has been little careful research on actual sources and sinks and on the dynamics of inter-regional atmospheric transport of pollutants. Secondary sources estimate 1 billion yuan in annual damage to farm crops from acid rain.[30]

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[26] Sheryl WuDunn, "Hopes Fades as Output of Oil Lags in China," *The New York Times*, September 3, 1990, p. 32.

[27] Vaclav Smil, "Missing Energy Perspectives," in *Damming the Three Gorges*, Grainne Ryder e.d., (Toronto: Probe International, 1990), p. 102–103.

[28] *Final Report*, p.6.

[29] Li Ping, *op. cit.*, p. 22.

A basic obstacle to reducing air pollution is the absence of comprehensive and reliable source emission data as well as enforceable control policies. Because mid-1980s emissions survey data have not been made available for national-level impact assessment, it has been impossible to develop effective monitoring and cost assessment procedures to plan and implement national control strategies for industry. These could include using limestone injection in conventional boiler systems, fluidized bed combustion, and other sulfur capture technologies.[31]

Another frequently overlooked energy-related environmental issue is the acute shortage of household fuel in the countryside. Growing demand for household fuel contributes to land loss and deforestation, thereby affecting agricultural productivity. Trees are felled for firewood, and plant stalks (estimated 400 million tons annually) are burned for household fuel rather than plowed under to enhance soil structure and fertility. Risk of erosion and land loss through desert encroachment is also increased, especially in northern arid areas. In the south, biogas generation has partially ameliorated farm household energy shortage (mainly for domestic cooking and preparation of feed for pigs), although biogas generation is feasible only in hot areas with ample supply of organic waste materials. Rural electricity supply could be increased with minimum environmental damage through greater reliance on small-scale hydropower stations. Despite problems with local sedimentation and inappropriate design of facilities for some locations, about 70,000 installations are used in over three-quarters of China's 2,133 counties, with a third of the countries relying on these small facilities for most of their power.[32]

Construction of hydroelectric and thermal power plants, water storage and flood control reservoirs, power lines, and other energy-related structures has wide and immediate social and ecological impact. Especially in the crowded eastern third of the country, construction displaces many people, destroys precious agricultural land and natural habitats, induces erosion from site preparation, pollutes water bodies, and increases deforestation. Offshore oil drilling and production platforms also contribute to marine pollution in biologically productive nearshore areas, although there has been better control in recent years, especially in Bo Hai Bay, an important oil and gas production area.

Environment impacts of energy development are felt at many levels. As with water pollution, however, impacts are difficult to manage comprehensively because of poor program coordination among national and provincial agencies. Separate bureaucracies are responsible for nuclear, hydropower, coal, and petroleum industries. In 1988, the State Council sought to streamline energy bureaucracies by removing the electric power element of the Ministry of Water Resources and Electric Power. The electric power bureaucracy was merged with other energy groups, although it is not clear if this has improved national policy planning and program implementation.

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[30] Vanessa Lide, *op. cit.*, p. 34.

[31] *Final Report*, pp. 2-4.

[32] Vaclav Smil, "Missing Energy Perspectives," in *Damming the Three Gorges*, ed. Grainne Ryder (Toronto: Probe International, 1990), p. 105.

It is doubtful that administrative measures alone can significantly reduce pollution and ecological impacts of construction and operation of energy production, processing, and distribution facilities. Prospects for improved policy coordination among government agencies became weaker in the 1980s as bureaus, agencies, and research units spawned quasi-governmental corporations to facilitate cooperation with foreign investors and firms. In the early 1990s, in a period of fiscal austerity, it remains to be seen whether this openness will continue. Resistance to foreign contacts on the part of the oil industry has been mentioned, although wider state control in oil and other energy sectors does not necessarily imply that there will be more attention paid to environmental concerns in energy development and distribution. Limited environmentally benign solar, wind, and tidal energy production capability has been achieved, but soft energy contributions to easing environmental impacts remain insignificant.

C. WASTE MANAGEMENT

Despite this foundation, in the 1990s China is faced with overwhelming pollution prevention and cleanup tasks. This is not surprising. Many of today's challenges stem from he leadership's failure in the 1960s to heed those who warned that continued pursuit of Soviet-style development, based on profligate resource use in heavy industry for short-term production gain, would ultimately lead to environmental disaster. Failure to sustain a productive relationship between natural and human systems, the key to China's longevity, is bound to have harmful social and economic, as well as ecological effects.

The traditional system sought maximum efficiency in the exchange and conservation of energy, moisture, labor, and materials. This was expressed physically and culturally in the interplay of soil, water, animals, plants, and people, even in areas like North China with difficult growing conditions. For centuries, engineering and agronomic skills were combined in complex agroecosystems which supplied human needs in face of formidable natural constraints and population pressure. Food crops, aquatic products, and medicinal herbs, along with cash and industrial crops like tung oil, ramine, tea, and pig bristles, were produced interdependently. Forty years of rampant, capital-intensive development, however, has damaged the biological resilience of the productive base. Soil quality, watershed integrity, biodiversity, and clean air and water have suffered.

This decline is well-illustrated in problems of waste management. Traditionally, exchange of organic and nontoxic materials (human and animal waste, vegetables, household garbage, broken glass, etc.) between city and country supported sustained use of densely settled zones near urban centers for food supply. Favorable economies of waste recycling and agricultural production were achieved in spatially-delimited urban-rural exchange zones. The shape and extent of these zones depended upon access to transportation, efficiency of marketing systems, soil fertility, and food price dynamics which governed supply and demand. Labor was never a problem. Nutrients and energy (from food, fertilizer from human waste, and labor) were "cycled" back and forth from city to country, to use the prescient terminology of the American soil scientist, James Thorp, who clearly described the process in the Shanghai area in the late 1930s.[33]

Similar processes were at work as recently as the early 1980s in Shanghai, where complex contractual ties listed between urban districts and municipal recycling and wastewater treatment bureaus to exchange vegetables and other foodstuffs for human waste, organic garbage, and materials like pottery shards and broken bricks. Urban to rural exports were used to fertilizer, compost pile construction, and fowl and animal feed. These arrangements were being rapidly displaced by the mid-1980s, however, as increased market demand for vegetables and desire for quicker harvests and higher profits from private vegetable plots led to greatly increased use of chemical fertilizer, herbicides, and pesticides.[34] Chemical runoff, along with industrial and housing development, has severely polluted soil and waterways in rural Shanghai counties. The sustainable, organic foundation is effectively destroyed.

Evidence of rapid decline in traditional waste recycling capability is clear from recently released statistics. Official sources now report that nationally, only a small portion of solid industrial wastes and urban garbage is being recycled. In 1988, only 26 percent of 560 million tons of solid industrial waste and slag materials from industries and mines were reprocessed, and cities are increasingly surrounded by piles of industrial and mining wastes and garbage for which authorities have not disposal options.[35] Even more disturbing is the seriousness of the hazardous waste disposal problem.

Very few industrialized countries (e.g., Denmark, Sweden, and parts of Germany) have effective hazardous waste management programs. Successful efforts must combine economic incentives, reliable technologies, and administrative authority to assure that waste is either reduced at source or rendered harmless to people and the environment through pyrolysis or other treatment processes. Administrative, economic, and technical components of programs must be coordinated and effectively integrated. This involves source reduction, collection, recycling, and treatment of household, municipal, and industrial wastes. National programs should be supported by public policies that provide tax and other incentives that assure profitable returns at each level of operation and lead to maximum participation of waste generators. China today has no effective hazardous waste management program, and prospects for developing a program are remote.

Failure of the traditional organic recycling system in urban areas is compounded by the overwhelming burden of having to manage nontraditional wastes from industries, mines, and rural enterprises. A recent review of the problem identifies chromium wastes, wastes from electroplating, textile dyeing, and leather processing industries, and township and village enterprise wastes, as priority concerns. Suggested remedial measures for chromium wastes include waste minimization, slag pile stabilization, and landfill construction. Chromium wastes have already seriously contaminated drinking water wells in the vicinity of mines and processing works.[36]

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[33] James Thorp, *Geography in the Soils of China*, (Nanking, 1937).

[34] Personal communications, officials of Changcheng (Great Wall) Commune, Shanghai, June, 1982.

[35] Li Ping, *op. cit.*, p. 22.

Electroplating shops, to take one example, are small, numerous, and scattered throughout large and small cities. There are over 300 in Shanghai and 200 in Beijing alone. This makes it difficult to apply effective controls in individual cases, and to introduce centralized waste collection and treatment operations. It is even more difficult to implement source reduction and recycling policies in the millions of small rural enterprises that have sprung up throughout the countryside in the past decade. The Chinese government has given lip service to controlling this growth as a long-term solution to the waste generation problem, but there is little evidence that this is being done. In fact, devolution of economic decision-making from center to local government levels in recent years mitigates against prospects for effective waste management in these enterprises.[37]

IV. Economic Implications and Prospects

Economic policies directly influence environmental protection programs and outcomes. In principle, economic analysis of environmental issues in industrially advanced countries helps inform choice of regulatory options. Mutually satisfactory balance between technical and administrative solutions is seldom achieved, however, because conflicts among government regulators, polluters, and public interest groups often lead to lengthy litigation. As noted above, some disputes remain unsolved for long periods, as with clean air legislation in the United States. Agreement in the U.S. Congress on updating 1977 technical amendments to the Clean Air Act, for example, took over ten years to negotiate.[38]

In China, there is no public participation in environmental law-drafting and management. Public protests over pollution insults to health, or damage to resources (e.g. in agriculture, aquatic products, animal husbandry, or forestry), may lead to improved local controls in isolated cases. Responsibility for policymaking in China, however, still lies with the government. Most important, economic aspects of environmental and resource problems in China still must be initially addressed from the narrow perspective of Party views on acceptable strategies and goals.[39] This differs from many Western countries, the Soviet Union and Eastern Europe, developing nations like Brazil, India, and Mexico. Increasingly, citizen activists influence policymaking through litigation, lobbying of legislative bodies, government agencies, and professional groups, and by raising public awareness through rallies and protests.

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[36] *Final Report*, pp. 15–17.

[37] Dali Yang, "Patterns of China's Regional Development Strategy," *The China Quarterly*, 122 (June, 1990), pp. 256–257.

[38] Peter Passell, *op. cit.*; Keither Schnieder, "Lawmakers Reach an Accord on Reduction in Air Pollution," *The New York Times*, October 23, 1990, p. A1.

[39] Song Jian, *op. cit.*

Even in the late 1970s and early 1980s, a time of active (and often productive) searching for theoretical rationales to link environmental protection and economic policy, Chinese analysts were straightjacketed by the need to develop policy in response to vaguely defined theoretical assumptions based on Party dogma. The prevailing wisdom of the time viewed laws of nature and the economy as complementary dialectical poles. Central planners were expected to find ways of "rationally" balancing investment in development and conservation at local and national levels, to avoid pollution excesses while facilitating essential economic growth. The larger aim was to sustain productivity in keeping with "the laws of proportional development," a vague spatial planning concept never meaningfully applied at a national scale. Experiments aimed at adapting theory to local needs, however, were tried in some provinces.[40]

During the 1980s, as China's command economy weakened, consideration of economic dimensions of environmental issues has shifted from broad theoretical approaches to a more specific focus on local and regional concerns. Emphasis has been on finding solutions to specific industrial siting and pollution control problems, nature and habitat protection,[41] and strengthening of urban water supply and wastewater treatment infrastructure to reduce harmful effects of contaminated water.

China's main problem in formulating environmental policy has been inability at the national level to frame regulatory strategies that can be consistently and effectively applied throughout the country. There have been frequent shifts in emphasis among ideological, administrative, planning, legal, and economic approaches. This has made it difficult to set clear environmental goals, and to establish criteria for policies to achieve these goals. There has been much confusion over ends and means in environmental protection. One reason is that the uncertain progress of price and fiscal reforms has slowed emergence of market mechanisms that might improve efficiency in land and resource use and lead to improved resource conservation and materials recycling. Prospects for creative environmental policy development in the present period of economic retrenchment are uncertain.

Progress will depend to a large degree on the rate and level of investment in environmental protection. Several questions arise. Should domestic and foreign investment be directed at technical upgrading of pollution control capability in factories, mines, cities, and provinces, or should investment primarily support institution-building, technical training, education, and public awareness? What are the sources of investment funds? At present, Japan and The World Bank are the main sources of funding to support environmental improvement in China, although loan prospects are still uncertain because of international reaction to the June, 1989 Tiananmen incident. An environmental investment strategy and allocation plan for China are currently under development by that Bank.[42]

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[40] See Shi Zhengxin, "Economic Readjustment and Environmental Protection," *Lanzhou Gansu Ribao*, April 23, 1982, JPRS-Worldwide Report, Environmental Quality, September 10, 10982, pp. 19–22 for an account of Gansu's experience in the early 1980s; see also Zhou uxiang, "Solving the Problem of Environmental Protection and Economic Policy," *Hongqi*, 13, July 1, 1982, JPRS-Worldwide Report, Environmental Quality, September 10, 1982, pp. 12–18.

[41] Meng Sha, "Woguo guojiaji ziran baohuqu de jianshe" [Construction of Our Country's national-level nature Protection Preserves], *Dili Zhishi* [Geographical Knowledge], September 1989.

Prospects for implementing an effective national environmental investment strategy are also clouded by the growing economic independence of Guangdon and Fujian. In recent years, this independence has weakened central ability to enforce regulatory programs in fast-growing coastal areas.[43] Despite the slowdown in foreign investment in China since 1988, there has been a rapid increase in Taiwanese industrial investment in Fujian, especially around Xiamen. Through early 1990, about 500 Taiwan investors invested $1 billion in consumer goods factories that produce bicycles, appliances, clothing, and shoes.[44] To facilitate investment, local authorities sell "land use rights" for up to 70 years to speculators who have little concern for environmental protection. For example, Wang Yung-ching, the powerful head of Taiwan's Formosa Plastics Group, has been discussing with Chinese authorities for several years the possibility of building a $7 billion petrochemical complex in Fujian. A major attraction of the proposed Fujian site is that it would not be subject to stringent environmental controls. Wang was deterred from building the project in Taiwan by intense pressure from environmentalists.[45]

Finally, there are several ways in which regulators can employ tax and fiscal incentives to further pollution control objectives. These include buying and selling pollution rights to stimulate cost-effective pollution clean-up, introducing least-cost, long-term investment strategies at municipal or provincial levels to foster integrated technical and institutional response to pollution, and recycling effluent fees to factories to improve technical controls. None of these measures, however, are effective on a national scale. The Environmental Protection Law, passed by the Standing Committee of the National People's Congress in December 1989, establishes norms and codifies many existing regulations. It was intended also to improve the efficiency of an effluent fee and rebate system introduce in the 1980s, which has led to reduced pollution in some large industries. However, low fee structures, misleading assumptions in pollutant discharge assessment, and technical flaws in the rebate return system have weakened the effectiveness of this regulatory tool.[46]

Clearly, China's leaders are well aware of the serious environmental problems the country faces. Nevertheless, as is the case in most developing countries, the quest for economic modernization has superceded concern over environmental pollution. Formal analysis of environmental policy issues has barely begun and given budgetary constraints, institutional inadequacies, and lack of recognition by the population of the seriousness of the pollution problem, China environment is not likely to see much improvement during the decade of the 1990s.

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[42] Personal communications, World Bank officials, September-October 1990.

[43] Enforcement problems in the marine environmental area were described by officials of the State Oceanic Administration, Beijing, personal communication, June, 1988.

[44] Adi Ignatius, "China's Old Enemies, Capitalist Taiwanese, Investment in the Mainland," *The Asian Wall Street Journal Weekly*, August 6, 1990, p.1.

[45] James McGregor, "Headstrong Tycoon Defies Pursues Huge China Investment Plan," *The Asian Wall Street Journal Weekly*, August 20, 1990, p. 11.

[46] Lester Ross et al., "Cracking Down on Polluters," *The China Business Review*, July-August 1990, pp. 38–43.

THE ECONOMIC COSTS OF INTELLECTUAL ALIENATION

By Carol Lee Hamrin [*]

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No one will question the importance to China's future of the loyalty and active contribution of its tiny (16 million) intellectual elite with a tertiary-level education—the faculty and (2 million) students of major educational institutions, professionals working in official research and administrative organs, and specialists in factories, hospitals, and farms.[1] The state's ability to mobilize the creativity of this group may determine whether China becomes a major power or remains a Third World country. Highly educated Chinese must be at the forefront of the immense changes still required to rejuvenate and modernize Chinese culture and society and make China competitive in the high-tech, post-industrial world of the twenty-first century. In a post-industrial era, moreover, the state's relationship with this group will greatly affect the extent of regime legitimacy and the effectiveness of its authority. For an increasing proportion of state officials is well-educated, and shares the values and interests of intellectuals, as well as personal ties of obligation based on school affiliation.

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[1] The 1990 census recorded 16,124,678 persons with a college education, including junior college. See a report in *Beijing Review* (November 12–18, 1990), pp. 21–23. Sun Ling sought to differentiate between the "more than 20 million mainstream intellectuals" and the "very, very small—less than one in 10,000" of them who were the source of bourgeois liberalization and of the Spring 1989 "turmoil." See "Correctly Treating Intellectuals," *Banyuetan* (Bi-monthly Chats) 13 (10 July 1990), p. 14, 15, in Foreign Broadcast Information Service China Daily Report [hereafter FBIS–CHI]-90–159 (16 August 1990), p. 19–20. Guo Lihua and Jiang Zhimin pointed to the serious problem China faces in guaranteeing jobs for its graduates and referred to 500,000 students who graduated in 1989 and 2 million students studying in universities as of 1990. See "An Investigation of Job Assignments for University Graduates and Thoughts Related to it," *Liaowang* [Outlook] 26 (25 June 1990), pp. 29–32, in FBIS–CHI–90–136 (16 July 1990), p. 31.

Yet both the willingness of and opportunity for intellectuals to cooperate with the state toward national goals is now quite uncertain. The leadership's use of violence to resolve state-society conflict at Tiananmen in the spring of 1989, and the ensuing repression and alienation of intellectuals as well as other social groups, has been a personal tragedy for thousands and a national disaster for China. Spring 1989 marked a highly inauspicious entrance into an era of pluralistic politics for the PRC. The polarization between the regime and urban society marked by the confrontation of 1989 was exacerbated by the state's persistence throughout 1990 to reject global trends toward pluralism and prolong recentralizing economic and social policies. This essay will first review the changes in intellectual life in the 1980s that gave birth to opposition politics, and then suggest some of the costs of the open conflict of 1989 and continuing subsurface confrontation in terms of China's modernization program. These significant costs can be sketched in broad brush strokes, although not quantified.

I. THE EVOLUTION TOWARD PLURALISTIC POLITICS IN THE 1980s

The deep roots of the events of 1989 can be found in the previous decade-long transformation of the mental tools and values of the urban, informed Chinese citizenry. Intellectuals were at the vanguard of this "conceptual revolution" and mediated the change for other groups by articulating, debating and dispersing new ideas through the media. A number of the key mediators became involved in the demonstrations and since have been vilified by the leadership as the "scum" of China's intellectuals, e.g. not representative of the mainstream. But in the current environment such slander seems convincing evidence of the strong and continuing influence of their ideas. This tiny but critical subgroup of intellectuals located primarily in Beijing and Shanghai were involved *de facto* in high-level politics by virtue of their national stature as official advisers, researchers, and artists who articulated sensitive issues impinging on regime legitimacy and authority. They were the intellectual pace-setters, cultural pioneers, and opinion-shapers whose thoughts and feelings portended what is to come for the rest of the populace influenced by the mass media—perhaps half of China's total population.[2]

It is impossible to say how many of China's 20 million college graduates share the ideas and commitments of this tiny group of critical intellectuals. There are many distinctions among intellectuals based on class background, generation, profession, and geographic location. Different networks of personal ties and rivalries divide them as well. Presumably, many technically-trained people running factories care more about bread and butter issues than political matters. Moreover, the reputations of some individual dissidents, especially those who left China, have been tarnished in the eyes of their colleagues and the public by actions taken last Spring. Yet the body of ideas generated collectively among the articulate elite still resonate strongly, especially among younger generations. The intellectual revolution will continue, despite the ebbs and flows of economics and politics.

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[2] Hong Kong *Ta Kung Pao*, 19 November 1981, estimated that the PRC television audience that year had rapidly reached 36% of the population, or 360 million, compared with an estimated 20–30 million in 1978. Numbers of both television owners and viewers continued to grow at phenomenal rates through the decade.

The base line for measuring the 1980s "conceptual revolution" of China's critical intellectuals is their traditional role as assistant and adviser to the leadership in the art of governance, and priest to the people, teaching them proper moral values. In the traditional Chinese view of authority, the exercise of moral and political power was the exclusive right of the state. If there were conflicts, the job of the intellectuals was to voice the inarticulate "murmurings of the people" to the ruler and, through moral suasion, convince the emperor to stem corruption and abuse of power while educating the people to obey.

In the modern era of nationalism, these views of authority resulted in a concept of patriotism that equated loyalty to the nation with loyalty to the state. After 1949, this traditional statism fit well with what may be called the Leninist myth—that the party's interests were the same as those of the society as a whole; that the party was omniscient and infallible; and that absolute and unquestioning loyalty and service was therefore due the party. In practical terms, unlike in traditional and early modern society, there was no independent source of status, employment or income for intellectuals, as the single party-state bureaucracy enforced its right to direct all sectors of society. No competing center of moral, intellectual, or political power was tolerated. Intellectuals seeking a sphere of autonomy were time and again the prime targets of repressive mass campaigns, as the political elite sought to reinforce its monopoly on power with technical and organizational resources much stronger than in traditional society. Even in less coercive times, regime determination of permissible language and thought, and control over information, created a climate of self-censorship that minimized critical thought. This combination of ideology and organization produced a modern version of the traditional scholar-officials—what might be called "establishment intellectuals," highly dependent on the state psychologically, organizationally, and financially.[3]

Current state policy is to reinforce this traditional role for the intellectuals, and most Chinese intellectuals believe that this is their ideal role. Certainly, in the current atmosphere the only means of political security is to adopt this stance outwardly. But in a number of fundamental ways, intellectuals have been breaking with tradition and exploring multiple new roles in society. The Spring 1989 crisis was only the latest step in a long process of intellectual emancipation that was speeded up and made irreversible once the leadership decided in the late 1970s to open up China to external ideas and intellectual exchange.

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[3] For a more detailed discussion of the role of establishment intellectuals in China, both traditional and modern, see Carol Lee Hamrin and Timothy Cheek, *China's Establishment Intellectuals* (White Plains, N.Y.: M.E. Sharpe, Inc., 1986), and the introduction to Merle Goldman, Timothy Cheek and Carol Lee Hamrin, *Chinese Intellectuals and the State: Search for a New Relationship* (Cambridge, Mass.: Harvard University Contemporary China series no. 3, 1987).

A. SPIRITUAL BREAKTHROUGH

The terrifying and degrading experiences of intellectuals during the Cultural Revolution produced a spiritual rejection of the statist mindset and a commitment to personal fulfillment; this is fundamental to what is happening today. By the time Mao died, if not long before, most thinking people—and especially the Red Guard generation—had lost the blind faith in the party so dominant in the 1950s. Cynicism and aversion to political activism replaced the worship of Mao and willing service to the communist cause. The reforms of the post-Mao leadership have been driven by the imperative to redress this "crisis of confidence."

B. IDEOLOGICAL BREAKTHROUGH

In the early 1980s, the political and cultural elite forged a new cooperative relationship as they worked to undermine the political base for remnant Maoists and create a new constituency for reform within the one-party system. Nevertheless, there emerged an ideological departure from the total dependency of the Mao era to a new relationship of mutual dependence, which had been attempted only sporadically and unsuccessfully in previous decades. As the goal of modernization replaced that of class struggle, the state needed intellectuals to rejuvenate the economy and culture, and also, one might say, to "modernize" Marxism-Leninism—the fundamental ideas legitimating the regime. In the process of critiquing the Stalinist model and legitimating alternative definitions of socialism, intellectuals began to investigate and absorb all Western systems of thought as well as to revive and rethink China's own pre-Marxist intellectual heritage. And they reclaimed their traditional right to participate in state affairs.[4]

Outside observers spoke of an ideological vacuum and pragmatic decision-making in China. In fact, it seems that an alternative ideology was developing based on the slogans of the May Fourth era that were reborn on the banners at Tiananmen—science and democracy. As the elite explored new ideas, politicians asked whether these ideas socialist and Marxist-Leninist, while thinkers asked if they were scientific and democratic.

The high tide of this cooperative relationship came in 1986, following periodic setbacks like the campaign against "spiritual pollution". An atmosphere of near-euphoria developed as intellectuals prepared for symposia celebrating the thirtieth anniversary of the Hundred Flowers Movement (part of the mid-1950s post-Stalin thaw throughout the socialist world). They intended to mark the demise of leftism and the triumph of the campaign to "emancipate the mind." There was a strong hope and desire that policies promising intellectuals improved status, expanded influence, better living and working conditions, and greater material reward, would finally bear fruit, and they could find personal fulfillment in helping the state become rich and strong.

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[4] The following summary of intellectual trends in the 1980s is based on my interviews and research for Carol Lee Hamrin, *China and the Challenge of the Future* (Boulder, Co.: Westview Press, 1990), especially pp. 30–40, 64–79, and 177–191. My focus on a series of "breakthroughs" was inspired by the excellent analysis of the transitions made in intellectual thought prior to Tiananmen in David Kelly, "Chinese Intellectuals in the 1989 Democracy Movement," in George Hicks, ed., *The Broken Mirror: China after Tiananmen* (Chicago: St. James Press, 1990), pp. 26–50.

C. FINANCIAL AND ORGANIZATIONAL AUTONOMY

Even though intellectuals' good will toward the state still prevailed, by the late 1980s they were beginning to break away from their economic dependency on the state. To improve both the economy and the material livelihood of intellectuals, the leadership allowed them to moonlight or leave government jobs to develop new enterprises such as venture capital corporations and consulting companies, even private schools and medical clinics. Semi-autonomous think tanks, newspapers, and journals were spun off from government institutes. Foreign as well as private or collective funding provided financial resources for this activity. Some younger intellectuals of the Red Guard generation had been working toward this goal of organizational independence since the late 1970s. They eagerly began to set up polling organizations and cultural foundations. Older intellectuals were more hesitant, but still involved, as evident in the popularity of semi-autonomous media such as the *World Economic Herald*.

These experiments in organization also helped foster a modern role for intellectuals as specialists rather than priests. Traditional and Marxist concepts of scholars as a morally superior elite gave way as technical skills were put to work for other social groups in a commercial exchange of service for cash. Examples included young lawyers helping newly-rich peasants go to court to protect their profits from greedy local cadres; journalists working for specialized journals and newspapers; and the Si Tong (Stone) Research Institute, an affiliate of the Stone Computer Company, drafting and publicizing legislation to protect private enterprise.

As they played new roles, intellectuals developed personal and organizational linkages with other social groups. An example would be young researchers at the Economic System Reform Institute, who implemented factory and municipal reform experiments and conducted public opinion polls at all levels of society on behalf of the State Economic System Reform Commission. As an infant civil society began to emerge under decentralizing reforms, intellectuals became potential advocates for themselves and other social groups against the demands of the state as well as tools of the state and bridges between state and society. In these sprouts of autonomy springing up in the cracks of the monolithic party-state the party leadership saw the specter of political opposition groups.

II. SYSTEMIC CRISIS

By the late 1980s, China was experiencing flagging economic performance, inadequate political responsiveness to new social demands, and an unsettled leadership succession.[5] The populace was dissatisfied with spiraling inflation and political-economic corruption. Unhappiness was exacerbated by the heightened expectations created by inflated promises of the reform wing of the leadership. The ouster of General Secretary Hu Yaobang in early 1987, by political means widely perceived in the elite as illegitimate, promoted an erosion of popular confidence in, the government and growing hostility between and among politicians and intellectuals. Events outside China fueled this loss of legitimacy. As political reform sped up in the Soviet Union and Eastern Europe, and Taiwan made a peaceful transition to pluralistic politics—all of which was widely reported in China—the mainland leadership appeared to be in slow motion by comparison. Erratic decision-making over economic policy in 1988 reflected insecurity and heightened tensions within the leadership.

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[5] See Hamrin, *China and the Challenge of the Future*, chapter 6, and Harry Harding, "China in the 1990s: Prospects for Internal Change," *National Bureau of Asian and Soviet Research*, no. 1 (September 1990).

The reemergence of leadership struggle in late 1988 galvanized intellectuals into unprecedented political activism in a desperate attempt to stave off the retrogression or even demise of reforms that began to seem inevitable after the death of Hu Yaobang. Through the spring of 1989, intellectuals marshalled all their moral and organizational resources on behalf of the reform program. Increasingly convinced that the party was incapable of addressing China's urgent problems and deserved to lose its monopoly on the shaping of the national agenda, some leading intellectuals took upon themselves the responsibility to shape a "new enlightenment" agenda, seizing back the legacy of the May Fourth Movement long usurped by the party.

Even delegates to the National People's Congress chastised the Premier for allowing the annual economic plan they had endorsed to be thrown aside for ill-timed and poorly-conceived *ad hoc* policies. Unanswered petitions to Deng Xiaoping to release political prisoners to celebrate the PRC's fiftieth anniversary—initiated by astrophysicist Fang Lizhi and eventually involving a spectrum of natural scientists, science administrators, artists, educators and social scientists—led to the largely unplanned, *de facto* emergence of the PRC's first civil rights movement. This marked an important turn from reliance on moral solutions to demands for legal-procedural checks on the power of the state.

The events of April and May 1989 brought all these trends together in a single historic moment. The exhilarating experience of marching together and helping the students peacefully govern Tiananmen and its environs throughout weeks of demonstration boosted intellectuals and many other citizens across a psychological divide in their attitudes toward the state and each other. Those from formerly quite separate social groups, institutions, professions, factions and generations discovered for the first time solidarity among themselves, as well as massive overseas support. And this experience was shared to a lesser extent nation-wide, directly in local demonstrations or vicariously through the mass media and the grapevine.

III. Trying to Turn Back the Clock

A divided leadership hesitated in responding to the burgeoning crisis until it was too late for any peaceful solution not involving major departures from the Leninist system of governance. The alternative of violent repression was chosen by the party elders over much opposition, albeit largely passive, from within the political elite, thus crippling the authority of the party, government, and even the military. The repressive response to the Spring 1989 crisis at home was prolonged into 1990 by the collapse of East European communism. Events abroad—wherein dissident intellectuals inside and outside the party played a key role in bringing down communist regimes—appeared to justify the interpretation of the Tiananmen demonstrations as a foreign-backed political conspiracy requiring a crackdown and encouraged further repression to prevent its reemergence. The impact of 1989 on the elders seemed quite similar to the effect of the outburst of anti-regime sentiment at home in the 1956 Hundred Flowers Movement in conjunction with the post-Stalin thaw in Europe. In both situations, ensuing suspicion and fear in the leadership brought about a number of repressive changes in behavior toward intellectuals.

Beginning in the summer of 1989, Chinese leaders adopted traditional intimidation tactics aimed at squelching the emergence of any opposition into the next century. These included:

- A prolonged purge process involving security investigations, study and criticism sessions, quotas for purge targets in each work unit, and arrests or demotions for supporters of the demonstrations throughout the bureaucracy [6];
- The withholding of degrees and jobs from uncooperative 1989 graduates; mandatory military training for reduced numbers of incoming students at Beijing and Fudan Universities; a further reduction of 30,000 in the numbers of students entering key universities for 1990-91 [7]; and sending recent graduates in government work to do "grass-roots" work, under threat of loss of urban residency permits for noncooperation;
- An aggressive media censorship, budget cuts or forced closures for hundreds of cultural organs, restrictions on foreign contacts, and a propaganda campaign against proponents of "bourgeois liberalism" involving the slandering of democracy activists as national traitors, to reinforce self-censorship and unquestioning loyalty among intellectuals [8];
- Discriminatory treatment favoring "loyal" (e.g., less political) natural scientists and engineers over social scientists and writers;
- A resurgence of praise for the military as an instrument of socialization and a model for social discipline, most notably in the campaign to emulate Lei Feng, the 1960s soldier paragon of blind obedience and self-sacrifice in the interests of the communist party;

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[6] See David Kelly and Anthony Reid, "Weathering the Political Winter—The Chinese Academy of Social Sciences, 1990," for a report on the purge at CASS based on a mission to China on behalf of the joint committee of academic exchanges with China of the Australian Academies of Social Science and Humanities, February 10, 1990.

[7] *Hong Kong Standard*, August 28, 1990, p. 10, citing Chinese sources on the plans to cut enrollments in most key schools for the 1990-91 academic year.

[8] See Linda Jaivins, "Cultural Purge Sweeps Clean," *Far Eastern Economic Review*, (August 23, 1990), pp. 47-48. A *Guangming ribao* [Enlightenment Daily] commentator article (June 27, 1990), p. 1, put forth the rationale for a continuing purge of bourgeois liberal ideas in the realm of art and literature.

- Tests of political loyalty affecting promotions and demotions during the reorganization of leading groups and the reregistration of party members; and
- A return to anti-intellectual themes, as exemplified in a *Wenyibao* article that asked rhetorically, "Who are patriots and who are traitors? Laboring people or the handful of intellectual scum?" and in General Secretary Jiang Zemin's lament that "Intellectuals have failed to integrate themselves with the working class." [9]

For intellectuals, the Tiananmen crackdown brought disillusionment, loss of hope, and a strong sense of betrayal, especially when contrasted with liberalizing trends in the Soviet Union and Eastern Europe. Both personally and as a group, intellectuals came to view their life options as severely limited in China. Alienation from the regime was evident in the rash of defections, an upsurge of visa applications for overseas study, direct and indirect refusal to carry on research work or to participate in political activity, and early retirements. For some, the sense of despair led to depression and even suicide. Others in search of meaning and community for the first time explored religious values, as witnessed by the growth of attendance in both official and unofficial churches and an upsurge of interest in the mystical practices of ancient Taoism.

By mid-1990, there was a moderation of regime policy and a resigned acceptance of the status quo on the part of intellectuals. This appears to be a temporary truce, however, founded on the lack of effectiveness of either harsh state repression or active intellectual resistance. Regime gestures to buy compliance and to weaken international moral and political sanctions included:

- the lifting of martial law in Beijing amidst continued tight security;
- the release of Fang Lizhi and groups of nearly 1000 Tiananmen detainees [10];
- allowing some family members of political exiles to leave China;
- the pro forma involvement of economic specialists in a months-long discussion of options for the 8th Five Year Plan (1991–95) and the ten year (1991–2000) program, sponsored by the State Council [11];
- periodic reiteration of pro-intellectual rhetoric[12] ;

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[9] Such informal remarks by Jiang Zemin while touring in the provinces were never included in more formal remarks addressing policy toward intellectuals.

[10] *South China Morning Post*, 11 September 1990, p. 10, in FBIS–CHI–90-176 (11 September 1990), p. 31, stated that 881 people had been released in three batches in January, May and June. More were released without publicity in October–November.

[11] *Renmin ribao* [People's Daily], September 24, 1990, p. 5, in FBIS–CHI–90–193 (4 October 1990), p. 16–17, reported on Li Peng's views upon reading the results of a forum sponsored by *Jingji ribao* [Economic Daily]. See also a summary of a seminar on theoretical questions in economic rectification and reform, *Jingji yanjiu* [Economic Research] 8 (20 August 1990), pp. 25–31, in FBIS–CHI–90–211 (31 October 1990), pp. 27–52.

[12] Jiang Zemin first spoke of maintaining pro-intellectual reform policies in his speech to young people to commemorate May 4th, *Xinhua* (3 May 1990), in FBIS–CHI–90–087 (4 May 1990). But his tone was strident and almost hectoring as he emphasized the duties of intellectuals to be patriotic, become one with the working class, and contribute to modernization. Few pro-intellectual themes were heard again until late July when a *Renmin ribao* editorial, 23 July 1990, recalled Jiang's speech. Again, the tone was one of warning, however. While the party

Continued

- invitations to activist students and scholars abroad to return to China without punishment in exchange for confession of guilt and cessation of political activity[13];
- forums for CCP "discussions" with the noncommunist political parties, and the promotion of a few noncommunists to the State Council, in an effort to publicize the alleged superiority of the "multiparty consultation system" compared with the competitive multiparty pluralism being adopted in the Soviet Union and elsewhere in the socialist world.[14]

Yet, these developments for the most part were hollow policies—form without content—representing short-term coping strategies on each side, with intellectuals waiting for the succession struggle to resolve itself, and the leadership buying time until the next turn of events. How long it will take and by what means this tenuous relationship can be reshaped is impossible to tell, since it will depend on contingencies at home and abroad that no one can predict. In the meantime, severe damage has already been inflicted on China's modernization prospects in several aspects.

IV. Another Lost Generation?

Some observers have compared the non-return or delay in return of many of the more than 100,000 PRC students and scholars overseas, along with disciplinary measures against college students and graduates in Beijing, to the effects of the Cultural Revolution. From one perspective this would seem an exaggeration, since the earlier ten-year hiatus in all educational activity nationwide created a generation gap in China's educated elite that more limited recent developments have not. As Leo Orleans argues elsewhere in this volume, China may have sufficient numbers—for its current needs—of educated professionals involved in high-level education and basic research. China-educated rather than returned students are adequate to fill the mid-level production-oriented jobs in the sciences and technologies of immediate concern, especially given current slow-growth policies. Eventually, however, with expanded growth, if students currently overseas fail to return at all, and cuts in new student enrollments in China continue, another serious gap in researchers, educators, as well as technicians could emerge as current personnel retire.[15]

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should "give more play to the role of intellectuals," it must also "set strict demands on them and guide them correctly." The focus continued to be on regaining central control over the affairs of intellectuals. See FBIS–CHI-90-142 (24 July 1990), pp. 12-31.

[13] *Xinhua*, 28 September 1990, in FBIS–CHI-90-190 (1 October 1990), p. 34, cited remarks by State Councilor and Education Commissioner Li Tieying in which he specified that those students who had joined organizations opposed to the PRC government would not be harmed "if they quit those organizations and admit their mistakes." Implicitly, those who had said or done something against the government in 1989 but who had not joined an organization could return without conditions.

[14] *Xinhua* (29 September 1990), in FBIS–CHI-90-191 (2 October 1990), p. 27, echoed these themes and gave background information on the five nonparty members newly appointed to leading posts (making 18 total).

[15] A report in *Liaowang* [Outlook] 26 (25 June 1990), pp. 3-5, in FBIS-CHI-90-136 (16 July 1990), pp. 23-28, quoted S & T professionals telling senior party and government leaders that over the next eight years, China would begin to experience the lack of Cultural Revolution generation specialists, as those now in their fifties retired. One scientist also pointed out the results of a survey showing that at least one-third of current S & T professionals were "not able to bring their roles into play" (presumably due to mismatch of skills to jobs, poor equipment, etc).

From another, less quantitative, perspective, China's current student body may well represent another "lost generation" like the former Red Guards now in their forties. Both groups have experienced a strong disillusionment with politics that breeds deep cynicism and both carry a political stigma that will diminish career prospects. In fact, many of the older activists of 1989 both at home and abroad were former Red Guards, a fact that fueled regime suspicion at the time. Now, this suspicion will poison attitudes between the regime and the younger siblings and protegees of 1989 as well. Unhealed wounds will enhance the prospects of future bouts of rebellion and repression as China proceeds through new transitional stages in socio-economic development.

V. COMPOUNDING THE INTERNAL BRAIN DRAIN

Given the escalating pace of global technological change that places a premium on intellectual activity in all types of employment and the sharp competition China faces from other rapidly-developing economies, any detour for advanced education and for intellectual policy in China now will have much greater proportional consequences than earlier crises. There is a large, albeit immeasurable, cost in terms of lost potential with the reversal of or delays in reform policies regarding education and job placement. These policies exposed an expanding number of professionals to international trends in all fields through travel, exchanges and education; gave greater job mobility to intellectuals to better match training with tasks; introduced more competition among students to obtain financial assistance and desirable employment; and replaced highly politicized and mind-numbing educational approaches with more modern curricula and teaching methods as well as more professional management. These reforms held out hopes of stemming China's hidden but enormous internal brain drain—the lack of development or misuse of human creative potential [16]. This may in the end prove to be the critical drag on China's economic modernization and cultural revitalization.

VI. FURTHER SETBACK FOR MASS EDUCATION AND CULTURAL ADVANCE

The negative impact for modernization of neglecting or repressing intellectual development and reinforcing a culture of falsehood and mistrust spreads far beyond the elite. Current policies exacerbate already serious problems in education caused by economic and social trends, including low levels of local funding for education and high drop-out rates due to the attraction of alternatives under the reform program. Prolonging the economic retrenchment program, apparently planned to last at least through 1991, will inevitably cause further loss of revenue, increasing the current gap of technically-educated workers in a population with 25 percent illiteracy and an unknown percentage of functional illiteracy.[17] The economic cost in terms of industrial accidents, production malfunctions, and loss of competitive edge with foreign investors who turn to countries with better-educated workers must be considered. The social cost in terms of stunted individual development, lack of civic virtues, and the "desertification" of Chinese culture is incalculable.[18]

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[16] For a discussion of China's human "stunted development," see *Ta Kung Pao*, July 24, 1990, p. 26.

[17] *Liaowang* 41 (8 October 1990), pp. 16, 17, in FBIS–CHI–90–201 (17 October 1990), pp. 29–31, cited scholars at the State Council's Development Research Center on these figures and the problems they pose for China's development.

VII. LEADERSHIP INFLEXIBILITY AND POLICY ERROR

If Chinese history is any guide, a major nonquantifiable, yet critically important cost of intellectual repression and alienation will become manifest in the policy arena. In any political system there is always a problem of leadership becoming isolated from peoples lives, particularly in China even in the best of times. Beginning with the events of early 1989, however, it appears that China's leaders even less welcoming than usual to all facts and options regardless of the sources. Earlier attempts in 1986–88 to enhance information feedback, "transparency" of exchanges of ideas within an expanding group that included specialists, and "scientific" decision-making procedures have given way to secrecy and even deception within a small, closed decision circle on most issues. This is bound to lead to more policy errors, large and small.

A number of semi-autonomous central policy research institutions set up during the 1980s under then-Premier Zhao Ziyang's patronage to provide some competition to recommendations coming from within the state bureaucracy have come under intense political scrutiny, with many being reorganized or even disbanded. Meanwhile, similar research organs attached to state bureaucratic units, which tend to reflect their narrow institutional interests, have regained a monopoly on policy research.[19]

Although this kind of reshuffle always accompanies a turnover of leadership, and was underway to a lesser degree under the new Premier Li Peng in late 1988–early 1989, the current repressive atmosphere and tighter controls on information and discussion have severely constricted policy debate and input from specialists. In many noneconomic areas of social research, specialists are finding it quite difficult to pursue their work and expect to have little influence on government decisions. There are much larger "forbidden zones" for policy research on international affairs, for example. The Hong Kong press has reported that while more reformist economic projections for the 8th Five Year Plan were permitted, they had little impact on the official draft plan from the State Council's research office and planning commission that proposed continued pursuit of the stabilization program.[20]

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[18] *Ta Kung Pao*, above.

[19] On economic policy, the State Council Research Office and the Planning Commission's Research Office dominated the drafting of the eighth Five-Year Plan, making the process much more closed than the seventh Five-Year Plan process, which involved considerable input from other think tanks as well as The World Bank. See Hamrin, *China and the Challenge of the Future*.

[20] For published versions of the contribution by the Development Research Center, see *Jingji yanjiu* [Economic Research] 7 (20 July 1990), pp. 20–37, in FBIS–CHI–900–197 (11 October 1990), pp. 28–44; for contributions by the Economic Research Institute of the Chinese Academy of Social Sciences, see *Jingji yanjiu* 7 (20 July 1990), pp. 3–19, in FBIS–CHI–90–075 (10 October 1990), pp. 9–28.

VIII. Crisis of Legitimacy and Authority

It seems apparent that the most important net result of the Beijing massacre was the fundamental loss of legitimacy of the CCP among the educated elite and the informed urban populace as a whole, whose sentiments and views intellectuals articulate. While some people are just angry at Deng Xiaoping and other elders and their protegees, many have lost confidence that the basic Leninist system of central party monopoly on power can either provide personal meaning for their lives or fulfill the national mandate to make China rich, strong, and respected in the family of nations. The collapse of communism in Eastern Europe and the shift toward pluralism even in the Soviet Union has encouraged this change of mind. There is now a widespread assumption that there is an historical "inevitability" of the shift to a post-communist era.

This does not mean, of course, that anti-regime political activism will follow. The traditional Chinese preference for moderation and fear of chaos has also been buttressed by the current situation in Eastern Europe and the Soviet Union. The CCP can effectively argue—at least temporarily—that there is no desirable alternative to its rule. Nevertheless, the social result is a far cry from the civic enthusiasm, creativity, and active support for government policy that would be a strong asset for rapid modernization. Rather, a stance of collective passive resistance to central authority—unprecedented in China—has spread widely among urban intellectuals and officials as well as workers. This echoes, of course, a long Chinese tradition whereby intellectuals out of favor with the court keep silent and try to preserve personal integrity, but the current situation has gone far beyond the intelligentsia and is much more a silent collective social act than individual moral protest. The resulting nonimplementation of unpopular central policies and the spreading maverick behavior by local officials, social groups and individuals both reflects and speeds up the weakening of central authority already well underway in the 1970s and 1980s. This is a strong liability for development.

IX. The Importance of the State-Intellectual Relationship

The dramatic and traumatic events of 1989 revealed in the starkest terms that the relationship between intellectuals and the state had become a central political problem for China. By the end of 1990, Chinese leaders reportedly were becoming quite concerned about the demoralization of intellectuals and the impact this had on the general mood of society.[21]

The leadership's approach to relations with intellectuals in coming months and years will be important not because intellectuals by themselves are the most powerful asset or threat to the leadership, or because changes in thinking alone will produce solutions to China's daunting problems. Rather, this relationship will be critical in determining the relative harmony or turbulence involved in China's accommodation to an irreversible shift in the locus and mechanisms of exercising authority as it modernizes. How this political process takes place will be fundamental to the speed and success of China's modernization.

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[21] Chang Mu, Hong Kong *Ching Pao* 160 (10 November 1990), pp. 30-33, in FBIS-CHI-90-220 (14 November 1990), pp. 24, citing Jiang Zemin's remarks to noncommunist personages in late October.

It seems inevitable that younger central leaders—or more likely, newly emerging leaders from the provinces—will soon begin exploring new options rather than relying on outmoded political tools and policies of the past. And they will turn to intellectuals as a key constituency for the legitimation of a new program.

THE IMPACT OF MAO'S LEGACY ON CHINA'S REFORMS

By Marcia R. Ristaino [*]

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SUMMARY

A central part of Mao's legacy is what is referred to in this essay as the Maoist tradition. It contains the values and concepts inherent in Mao's approach to China's society, culture, economy, military, and politics. The Maoist tradition comprises a body of thought, policies, and programs that together represent a repertoire from which China's leaders still reference and project their policy choices. In addition, Marxism-Leninism-Mao Zedong Thought constitutes the state philosophical framework from which solutions and goals relevant to China's future continue to be expressed.

Historically, Mao remains closely identified with China's revolutionary success in establishing the People's Republic of China in 1949. He is credited with originating the winning strategies that defeated foreign and domestic enemies, unified the country, and brought it recognition from the modern world. This historical part of the legacy provides Mao with a deep emotional connection with China's people, even though his reputation later became tarnished by the calamitous Cultural Revolution which he originated and led.

Beyond Mao's historical role, the Maoist tradition has found concrete expression in social programs, laudable for their heavy emphasis on staying attuned with public interests, for community solidarity, and for a commitment to egalitarian social goals, especially concerning China's huge impoverished rural population. The expansive delivery of basic health care services and mass educational

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[*] Technical Information Specialist, Order Division, Library of Congress.

programs are important examples. These efforts made extensive use of the unique Maoist mass line concept that sought to arouse and consolidate popular support around Party goals through intensive ideological indoctrination. According to the Maoist tradition, the military, inspired by its guerrilla heritage, plays a key role in civilian affairs to the extent that when issues of social stability are addressed, the military's role becomes a natural and integral part of planning and choices.

The Maoist tradition has been less successful in the realms of economics, culture, and politics, especially as China has attempted to approach the outside world for expertise, ideas, and techniques for modern development. Maoist economic policy has been criticized for being overly centralized, utopian, unresponsive to local conditions, and stifling of human initiative. The topics and boundaries of cultural affairs have been determined by the agendas of Maoist ideology, thus arresting spontaneous and creative expression.

In the political realm, the Maoist tradition has distorted the basic concept of democratic centralism as it was originally understood and practiced in China's early revolutionary period. Mao, through his assumption of complete power and through the systematization of his writings into a unitary body of thought, eliminated any possibilities for other fruitful avenues of thought and action. The representational framework of a people's congress system, balancing Mao's political power, was essentially discarded except on paper. Even the Communist Party structure became undermined by Mao's cult of personality. The regular interjection of class struggle to motivate change and instill political awareness has mainly substituted abstract and utopian goals for well-planned and rational approaches to China's growth and development.

China's post-Mao reform program has set in motion ideas and processes that seriously erode the Maoist tradition, especially the political and cultural aspects always so closely interrelated in China's experience. The urbanization of China's peasant society has inspired and accelerated diversity, the transfer of job skills, and the implantation of new values such as self-assertiveness and even acquisitiveness. Accompanying urbanization has been an increase in exposure to new sources of information. Expanded media channels have offered greater opportunities for variety, cultural diversity, and the formation of independent opinion. The recent condemned television production, *He Shang*, clearly displayed a new creativity and a challenging of China's traditions.

China is confronted with the tension between two different approaches to realizing its twentieth century goal of achieving prosperity and power. Especially in times of stress, the Maoist approach, with its clear-cut and familiar authoritarian essence, still holds attraction even for the post-Mao generation. For those now holding office, who were heavily indoctrinated and actively participated in Maoist politics, the Maoist tradition still remains as one very important source of policy options and solutions to China's difficult problems.

I. INTRODUCTION

Mao Zedong's legacy provides the theoretical underpinnings for the People's Republic of China through the body of writings known as Marxism-Leninism-Mao Zedong Thought. This state philosophy represents the legitimizing framework for socialist governance within which all official policies and actions must be expressed and referenced.

But Mao's legacy has another dimension that allows it to act upon China's state and society in ways which both foster and inhibit China's struggle to developand become part of the increasingly interrelated world community. This active dimension is derived in part from Mao's colossal historical role in leading the revolutionary movement in 1949. Mao is credited with having developed the winning strategic concepts of the countryside surrounding the cities, the mass line, and guerrilla warfare strategies and concepts. Mao also was a leading participant in the legendary Long March and later published his famous integrative political theses on the New Democracy.

Most key aspects of what has become Mao's legacy actually were nurtured and developed by others in the course of the revolutionary movement. But with Mao's gradual accumulation of predominant state, party, and military power within the movement, and the systematization of his writings into a singular body of thought, the many creative aspects of the Chinese revolution became associated with him. In retrospect, a strong argument can be made that within the historical context of wartime conditions, extreme poverty, and social deprivation, the times demanded an imposing leader to provide focus to the otherwise dispersed and mainly rural revolutionary movement.

Mao's historical standing certainly was diminished by his identification with the disastrous Great Leap Forward and the Great Proletarian Cultural Revolution. Nevertheless, these policy disasters still do not appear to have diminished Mao's close association and emotional connection with the national triumph of 1949.

Mao's legacy, or "tradition" is not limited to political, economic, social or cultural matters. By contrast, one can identify other leaders, such as Chen Yun, specifically with complex models of economic development. Rather, the Maoist tradition is comprisedof a broad spectrum of ideas and concepts that can still be evoked in ways that sometimes are unifying and ameliorative and other times, disruptive and retrogressive.

This paper first examines residual aspects of the Maoist tradition, providing examples of its renewed influence especially in Post-Tiananmen China. Secondly, this paper identifies key developments in post-Mao China arising with reforms, which challenge his legacy and operate in tension with the Maoist tradition.

II. THE MAOIST TRADITION

This discussion of Mao's legacy considers how elements of the Maoist tradition support or inhibit China's twentieth century goals of achieving wealth and power within the socialist framework requiring an egalitarian distribution of resources. Although many of the social outreach and collectivist aims are protected under the

Maoist tradition, flexibility and diversity in thought and action are undermined.

A. BASIC HEALTH CARE SERVICES

The only program initiated by Mao himself and still functioning in China, concerns the provision of basic health care services to China's rural masses. Launched during the Cultural Revolution, this program trained young "barefoot doctors" in practical skills essential to basic public health work. Oriented toward preventative rather than curative medicine, these medical personnel provided services such as inoculations, immunization against prevalent diseases, instruction concerning the proper preparation of foods, water purification methods, public sanitation, and personal hygiene. The program's aim was to elevate the health standards of China's largest population segment without taxing human and material resources that were often in short supply or nonexistent. Delivering health care and preventive treatment to the countryside has relied heavily on the large numbers of neighborhood health workers driven by a Maoist ideological commitment to serve the rural masses. This Maoist program constituted an innovative approach to a widespread problem by a system with limited resources.[1]

The present health-care program continues to display certain predispositions and basic values characteristic of the Maoist tradition. First is a fundamental mistrust of the "elitist" urban medical establishment, buttressed by a continued allegiance to traditional Chinese medicine which is often still preferred by the rural population. Second, the program stresses the importance of local autonomy and initiative in the planning and delivery of health care services. Third, it emphasizes the equal status between patients and health-care providers.

Because the Maoist program has been criticized for subjecting people to poor and unskilled medical treatment, the government has been attempting to professionalize the barefoot doctors by implementing selection criteria for candidates, by training those selected in modern medical techniques and practices, and by offering certification as a "country or village doctor" for the best candidates. Nevertheless, peasants who can afford to do so often by-pass the village clinic for more professional services available at the county-level tier of the medical system. Nevertheless, characteristic of Maoist values, the government's health care program aims to evoke a substantial measure of voluntaristic support directed at providing equitable services to the greatest number of primarily poor rural inhabitants without creating a new class of medical elite.

B. CULTURE AND EDUCATION

Mao's "Talk at the Yan'an Forum on Literature and Art" written in May 1942 in the context of the War of Resistance against Japan, remains the basic text concerning artistic and literary endeavors in China. The influence of wartime conditions on this document is conveyed in one of its key lines: "fight the enemy with one heart and one mind.[2] According to Mao, the main function of artistic expression is to serve the people. This is to be accomplished by writers and artists going to work among the workers and peasants and learning about their daily lives. Artists are to use their creative talents to "concentrate" what is discovered during this exposure for expression through the medium of their artistic work.[3] These works have the primary purpose of inspiring the masses and elevating their cultural level by giving it a coherent but focused expression, asdetermined by politics.

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[1] Marilyn M. Rosenthal and Jay Greiner, "The Barefoot Doctors of China: From Political Creation to Professionalization," in *Health Care in the People's Republic of China: Moving Towards Modernization*, M. M. Rosenthal, ed. (Bolder, CO: Westview Press), 1987, p. 5.

Mao's writings clearly indicate the subordinate status of art to politics. To serve the masses well, artistic works must have revolutionary content as well as artistic form. They must unite and educate the population around themes enunciated in the Party's political programs, and be able to evoke in the masses a new level of political and social consciousness and enthusiasm that can be harnessed to achieve the Party's goals. The cadres working in the fields of art and literature acquire the vision and means of expression to carry out their work through their own emersion and study and application of the teachings of Marxism-Leninism-Mao Zedong-thought.

Mao regarded works of art and literature as particularly powerful in shaping the thinking and consciousness of the masses, or in creating "one heart and one mind." He noted that works lacking artistic quality carry no force, regardless of how progressive politically they might be. On the other hand, those with artistic quality but bad political content he described as extremely dangerous. And because of their potential power and influence, Mao regarded intellectual groups which create these works with suspicion and subjected them to regular Party supervision and discipline. Also, Mao warned artists and intellectuals against the pitfalls of copying wholesale Western traditions or styles or of falling into a stagnant traditionalism in the artists' prescribed mission to establish a modern national cultural identity. Mao's famous writings on the subjects of literature and art are again being emphasized as the basic reference works for guiding and evaluating current literary and artistic activities.

Political and ideological concerns also are central to Mao's approach to education. Emphasis on correct ideology has required students to undertake lengthy periods of study in Marxism-Leninism-Mao Zedong Thought. This study is meant to instill in them a commitment to serving the community and strengthening the state, and to mold young thinking along orthodox lines. Educational programs are to have the broadest reach within the population, to stress moral training and enhancement, and to inspire unity of thought and social stability.

Anti-intellectual and anti-expert biases are pervasive in the Maoist approach to education. This was clearly evident during the Cultural Revolution when the system of higher education was shut down as tens of thousands of college students responded to Mao's call to join Red Guard organizations. China in effect lost a rising generation of trained talent required to build a viable future.

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[2] Mao Zedong, *Selected Works of Mao Tse-tung*, vol. 3 (Beijing: Foreign Language Press, 1967), p. 82.

[3] Ibid., p. 82.

In place of rigorous academic programs, Maoist training programs included periods of work "among the masses" in order to inhibit or dispel elitist tendencies that segregate mental and manual labor. Basic education was stressed over the highly developed specialized skills of the "expert" as having the primary role in education. Students underwent military and physical training and were indoctrinated in the model behavior of heroes such as Lei Feng, the super patriot who spent his short life "serving the people." They were exhorted to emulate the social and political discipline of the Chinese Communist Party and to participate in its mobilization campaigns to raise popular standards of literacy and education. In short, the Maoist emphasis in education was upon serving broad community needs first, instilling ideological understanding and commitment among China's young, and building a basis for solidarity with the Party's current and future political goals and programs.

Concern with these conservative values has reappeared, especially following the "political turmoil" of 1989. In his authoritative government Work Report, Premier Li Peng called on the educational system to stress moral education and give "top priority to a firm and correct political orientation." Further, Li emphasized the importance in the curricula of teaching Marxism-Leninism and Mao Zedong Thought, learning from the masses, and serving the people.[4]

C. ECONOMICS AND SOCIETY

Maoist economics emphasize collective gains and social welfare as opposed to the privatization of the collective economy.[5] In Mao's system, social goals constitute an essential part of the process of economic development. It is a socioeconomic system that purports to treat each member at least similarly. At the basic level of the system's performance, peasant households were incorporated into collective and ultimately into communal units which subsequently guaranteed the livelihood and community of the members. The Communist Party, through the State Plan, sets the economic program to be strictly followed within the vast communal system and exercised complete control over all available human and natural resources. Industrial projects, massive in scope and in scale, were also part of the planned structure.

The system was energized by the concepts of class struggle and a campaign style of operation. "Class enemies," such as former landlords, were targeted time and again for the purpose of arousing the masses to participate in common endeavors. Participation in these campaigns was fueled by mass emotion, which "advanced elements" or party cadre were charged with transforming into a level of political consciousness effective in bringing about desirable economic and social change. Thus, change was expected to occur not through broad participation in institutions or representative bodies, but by the orchestrated mobilization of the masses directed at realizing Party goals and programs. The power of this approach and its capacity sometimes to exceed rational bounds are illustrated by the social and economic disasters of the Great Leap Forward and the Cultural Revolution. Both were essentially utopian campaigns aimed at achieving a modern transformation of the Chinese economy, society, and even the Chinese people, within a short timespan.

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[4] Li Peng, "Work Report to the Third Session of the Seventh National People's Congress," March 20, 1990, in Foreign Broadcast Information Service (FBIS) Daily Report: China, (April 6, 1990), p. 20.

[5] For a comparative discussion of China's economic models, including the Maoist approach, see Dorothy J. Solinger, ed., *Three Visions of Chinese Socialism* (Boulder, CO: Westview Press, 1984).

There are important contradictions which were inherent in the Maoist economic approach. Maoist policies taught self-reliance and denigrated bureaucracy and its procedures. And yet, because of the highly vertical nature of the Maoist organizational style, the system fostered dependence and lack of initiative at lower levels. Also, the projected Maoist developmental models exacerbated this failing by taking a "one size fits all" approach, applying a singular model to the entire country without careful consideration of existing and inevitable variations in local conditions.

China's present leaders continue to display basic concern over inequalities in distribution and income, and to emphasize solidarity and the priority of serving common needs rather than profit. There has been some movement back towards a limited degree of collectivization and curtailment of family enterprises in the recent course of economic "readjustment." The heavily endorsed "Spark Plan" and "Torch Plan" are Maoist in flavor because they rely upon the mobilization of cadres trained in technical fields and dispersed to serve in rural and urban areas in order to raise general skill levels. Programs such as these perpetuate the Maoist concern with broad reach and social mobilization to achieve developmental goals. These recent mobilization programs, however, have the added dimension of supporting integration of modern knowledge into the general population.

D. POLICE, THE MILITARY, AND STATE POWER

The Maoist tradition has always inculcated a substantial measure of fear, threat, and intimidation in the course of its existence. To some extent, this feature arose from the agrarian wartime conditions under which the revolutionary movement developed and from its political evolution under Mao into a totalitarian state. The well-known Maoist teaching "political power comes from the barrel of a gun" has had applications in China's internal affairs, as was shown again in the decisions made about the Tiananmen demonstrations in June 1989.

According to the Maoist teachings, the People's Liberation Army (PLA) was regarded as the "pillar of the people's democratic dictatorship."[6] It is the guardian of the revolutionary Yan'an Era (1937–45) spirit of solidarity, patriotism, public service, self-sacrifice, and plain living. Also characteristic, the military was closely interrelated with police and civilian powers, a condition that arose out of the guerrilla heritage developed during the early base areas and rural soviets period.[7] Guerrilla cadres served as soldiers, Party leaders, and government administrators. This Maoist ideal, of the omnicompetent cadres, insured that political, military, and administrative roles overlapped and eventually became fused. It also meant that in the course of maintaining social order and discipline, the military performed a natural and necessary role.

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[6] Li Peng, "Work Report," (March 20,1990), p.6.

The guerrilla heritage has given the PLA a strong voice in China's civilian affairs. PLA cadres have held concurrent positions in both Party and government posts. Frequently, police recruits are drawn from former PLA personnel. Thus, when issues of social stability and order are addressed, the military's role becomes an integral part of the planning and the resulting choices and programs.

Traditionally, the PLA has played a key role in fostering ideological development and instilling social discipline. These roles are currently apparent in China's renewed emphasis on the popular emulation of the military hero Lei Feng, and also by the PLA's providing military training to university students in Beijing and Fudan universities. Further, the Party, operating under the perceived threat of social instability, has delayed planned political reforms directed at separating Party and government functions. Such separation would likely promote and develop specialized functions and probably have the added important effect of reducing the military's role in civilian affairs. Apparently, this latter outcome is one which the Party still cannot support.

E. POLITICS

The Maoist political tradition constitutes an important revision of the basic organizational principle of China's political system known as democratic centralism. This principle has two cardinal requirements. One is that discussion and debate of major local issues take place among organizational members at the various levels of the hierarchical system and that the results of those discussions be transmitted and become integrated into formal Party policy decisions. The second is that once policy decisions are made, obedience of lower to higher levels of the structure in following Party policy must be complete. Mao upset this system's balance by shifting political power away from democratic, representational forms and toward his own authoritative person and approach. The result was creation of the cult of personality and an imposed unity of thought that together curtailed the development of diversity and representative institutions.

A multi-level people's congress system within which local ideas and initiatives could be presented and debated before being forwarded for consideration at higher policymaking levels in the political system never was given the opportunity to develop. Yet the concepts and the system had firm indigenous roots in China's own historic revolutionary base areas.[8] Social, economic, and political pressures that might have found constructive release through such a system instead found often violent expression in Mao's campaign approach aimed at achieving what were more frequently utopian ends.

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[7] David S. G. Goodman, "State Reforms in the People's Republic of China," in Stephen White and David Nelson, eds., *Communist Politics: A Reader* (New York: New York University Press, 1986), pp. 128–31.

[8] The vital predecessor organizations to the people's congress system were China's multi-level soviets. See Marcia R. Ristaino, *China's Art of Revolution: The Mobilization of Discontent, 1927 and 1928* (Durham, N.C.:Duke University Press, 1987), pp. 126–39.

China's wartime conditions no doubt promoted and perhaps required a revision of the principle of democratic centralism. But after 1949, when politics concerned governing the country and establishing its institutions and economy, the political system required more balance. Greater balance between centralization and representational/democratic forces does not in itself constitute a serious challenge to the utility or efficacy of the mass-line campaign approach aimed at accomplishing equality and social justice. Omitting a functioning representative system, however, does remove popular participation in identifying the issues and setting priorities to be realized by these campaigns.

In this vein, the Maoist tradition injected into the political system the concept of class struggle against internal and external enemies. This was done in order to trigger change and instill political awareness, yet it seemed only to substitute abstract and largely meaningless targets for real economic goals and political issues. As the Cultural Revolution showed, the outcome of this political approach was to produce a momentum for destruction that ultimately overwhelmed any constructive activity and growth. In its present context, class struggle is again being discussed and defined not as the principal contradiction in China's society but as one that still exists. Its current target is bourgeois democracy or the Western multi-party system which, if initiated, would undermine the predominant role and status of the Party.

III. Post-Mao Challenges

Two years after Mao Zedong died in September 1976, China embarked on a comprehensive reform program that posed basic challenges to the Maoist tradition. The new reformist thinking has posited the goals of making China prosperous, culturally progressive, and a functioning part of the world community. The following discussion considers some of the key aspects of the reformist challenge which, viewed against the Maoist tradition described above, illustrates how China is indeed confronted with having to integrate two very different approaches to national growth and development.

A. URBANIZATION

An important influence on China's current condition is the rapid growth of urban population. Between 1982 and 1986 the country's urban population increased from 20.6 percent to 37 percent. Part of the reason for this considerable increase was the 1984 decision to broaden the criteria for classifying an area as a city or town. Nevertheless, some demographers estimate that by the year 2,000 nearly half of China's population will live in cities and towns.[9] (For a more detailed discussion of urbanization, see Banister's chapter in this volume.) When that occurs, tho popular conceptions of

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[9] Robert L. Worden, Andrea M. Savada, and Ronald E. Dolan, eds., *China: A Country Study* (Washington, D.C.: Federal Research Division, Library of Congress, 1987), pp. 81–82.

China as either an enigmatic peasant society or one that is comprised of a rural Communist society in which the roles of peasant, soldier, and cadre are necessarily entwined no longer will suffice.[10] As this urbanization process develops an ever larger segment of the population is exposed to the diversity of urban living, the specialization of livelihood, the increased availability of information, and the relative abundance of urban goods and services.

Township enterprises, emerging under the reform program, have become a major contributor to the national economy. They also serve as an important bridge between urban and rural areas by absorbing the otherwise unemployed rural labor. Perhaps just as important, job functions and skills previously limited to large urban areas begin to be disseminated and understood on a broader basis within society. Thus, job responsibilities become more similar and transferable, helping to bridge the previously enormous gap between city, town, and countryside. With increasing urbanization also comes increased exposure to the variety of information, institutions, trades, professions, and skills that make up a more urban environment. The diversity and complexity inherent in this urban milieu contrast with the relative homogeneity of rural China and certainly with the "unity of thought" that existed under Mao.

It is most unlikely that the leadership will be able to control urban growth, as it did in earlier years. In addition, the reforms have opened up large areas of the country, especially coastal China, to extensive development projects that have required a large work force and, by drawing upon pools of unemployed agricultural workers, have promoted further integration of urban and rural populations.

The urbanization process by its very nature and unfolding erodes key Maoist values such as ideological purity, a unified formula approach to problems, committed self-sacrifice, and emulation of national model heroes. In their place, new values such as self-assertiveness, acceptance of diversity, and the nonideological formulation of problems are gaining support and meaning. Adherence to these different values seems to include a rising level of expectation by urban residents that the social and political systems will indeed serve the people honestly and effectively.

B. THE MEDIA

Accompanying the reform program and urbanization process are the development and proliferation of print and broadcast media. While Mao made sure that the media were limited and carefully controlled, in the post-Mao era the publishing industry has expanded beyond its two major centers in Beijing and Shanghai. Newspapers have increased in number and circulation and exhibited more leeway for diverse and even critical opinion. Before the Tiananmen crackdown, China's journalists showed at times remarkable determination in reporting accurate and reliable information. Their contributions and the enhanced flow of information have helped broaden the forum of ideas and have promoted more awareness among the population of contemporary issues both within China and in the world. Since Tiananmen, the number of newspapers and periodicals have decreased and they are again being censored.[11]

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[10] John Fincher, "Zhao's Fall, China's Loss," *Foreign Policy*, No. 76 (Fall 1989), pp. 20–21.

Foreign information sources and facilities now based in China contributed to the reformist trend before June 1989. Also, China now has telecommunications and broadcast satellite capabilities that facilitate television and radio transmission internally and link China to communication centers around the world. Radio broadcasts serve remote areas of the country. Official estimates claim that two-thirds of the population have access to television broadcasts. China's development of facsimile, data transmission, and computer-controlled telecommunications services permit the retrieval of international news as well as scientific, technical, economic, and cultural information.[12] It is well known that these avenues of information came into play during the Tiananmen events.

Thus, although the government continues to exercise close supervision over the contents of broadcast programming and still uses these channels as a powerful tool for molding and controlling public opinion, the population has become the direct recipient of information to an extent never before realized in China. An important by-product of the information explosion is the expected narrowing of the gap between urban and rural communities. Further, it is not inconsequential that more than one-hundred million of China's rural and urban inhabitants now live within broadcast distance of Hong Kong and Taiwan.

In short, the expanded capabilities of print and broadcast media have provided direct information to the population that can be discussed, debated, and digested, especially since most television viewing in China takes place in groups. The opportunities were, and to a more limited extent, still are present for expanding the mind-set and horizons of a people previously constrained by limited information and the narrow perimeters of the Maoist tradition.

C. SELECTING A CULTURE—THE *HE SHANG* EXAMPLE

China's expanded mass media channels acquired new significance in mid-June 1988 when a group of prominent intellectuals produced a six-part television documentary, with the title *He Shang* (River Elegy), exploring the past and future of China's culture. The production was a remarkable success, was rebroadcast by local television stations, and became the subject of letters and critical commentary in the print media. *He Shang* locates the sources of China's contemporary weaknesses and problems in the traditional continental culture, which is symbolized by both the nurturing and destructive roles played by the Yellow River throughout China's history: "There would be no internal dynamism and no one-hundred flowers blooming without extensively assimilating the essence of a foreign culture."[13] The negative argument presented is that the Yellow River tradition stifles individual thought and action, focuses attention inward, and prohibits the growth of entrepreneurial activity, all factors that promoted development in the West, and factors inherent in the Maoist tradition.

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[11] "Let the Publication of Newspapers and Periodicals Develop in a Healthy Way," *Ban Yue Tan*, No. 16 (August 25, 1990), in FBIS *Daily Report: China* (October 3, 1990), pp. 20–21.

[12] Worden, Savada, and Dolan, *China: A Country Study*, pp. 366–369.

[13] *He Shang* (River Elegy), JPRS Report (JPRS–CAR–88–002), Washington, D.C., December 6, 1988, p. 17.

The series calls for nothing short of a revolutionization of China's culture in the direction of the sea—towards opening to outside influences in order to create a modern culture. It argues that China must integrate or incorporate cultural changes into its plans for economic growth. Thus, parallel to cultural developments are recommendations that China follow a coastal economic strategy designed to expand the development of capitalism contained mainly in China's coastal cities in the course of introducing the ideas and concepts of Western industrial civilization.

This kind of cultural-historical programming initially can appear rather benign except for the important fact that in China, culture, politics, and history are closely interwoven. Traditionally, intellectuals have placed a high value on moral leadership and service to society, in addition to developing their specific disciplines. When this approach is taken today, it brings intellectuals into conflict with Party cadres, who see themselves as the sole developers and disseminators of-any theoretical information. Further, the series completely sets aside any attempt to describe China's history by using Marxist categories. Produced outside the Party's vertically-defined propaganda channels, *He Shang* made direct and effective contact with the population by providing interesting and provocative issues for discussion and debate. While the government was able to suspend broadcast of the series, it is unlikely that the experience of viewing and responding to the material, especially for China's post-Mao generation, will soon be forgotten.

He Shang displays no sense of awe for Mao Zedong. In one segment, Mao is described as "China's greatest contemporary leader" and "a man of great talent and bold vision," but when confronted with the symbolic Yellow River issue, Mao reportedly had little to offer other than his "dissatisfaction." [14] Further, Mao's disappointing reticence on this key problem was exacerbated by his disastrous utopian policies culminating in the Cultural Revolution. Couched in historical allusion, Mao probably was the historical figure described in He Shang who continues to be worshipped by visitors while Liu Shaoqi (identified by name), the former Chairman of the Republic, is ignored. Liu's ill fate during the Cultural Revolution is ascribed to the backward nature not only of China's culture but also its politics, economy, and social structure.

A western reader/viewer of *He Shang* can easily be struck by the totality of the condemnation of China's traditional culture. The work has the heavily dramatic and merciless tone of a national cultural self-criticism session. The West is constantly extolled for having undertaken foreign conquest and trade expeditions while China slept in agrarian torpor. The great Chinese maritime expeditions carried out in the fifteenth century are condemned for lacking conquest or trade motivations when, in fact, they might be viewed in a more favorable light in the context of today's world. Also, one scholarly participant in the production, *He Shang*, recommends that only a thorough "self-questioning" of history will promote a genuine understanding of history and lead China to "historical wisdom." [15] Such reasoning raises the issue of whether such a long and rich tradition can be understood in some whole or complete way. Perhaps it is a pattern of thinking characteristic of a society that has had only repeated indoctrination and for whom only "total" answers or solutions to problems are adequate.

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[14] Ibid., p. 29.

D. THE CHALLENGE FROM ABROAD

The Maoist tradition, as it continues to operate in China, has many external challenges. The foreign media and incoming publications have already been noted. Likewise, commercial contacts, especially through Hong Kong and Taiwan, expose the population to knowledge about a "better life" and to different systems and ideas. The events in the Soviet Union and Eastern Europe have posed a severe challenge to the validity of Marxism-Leninism, and by extension and association, Mao Zedong and his thought.

Thus a conflict has developed between China's nationalistic concern with guarding its cultural and political autonomy and foreign values such as human rights requirements and economic sanctions. These outside pressures on the still-present aspects of the Maoist tradition, complicate and frustrate a forceful or effective policy response.

IV. PROSPECTS

The long-standing concern among China's leaders is the phenomenon described as the "heap of loose sand" in which society lacks all cohesion, is unstable, and easily degenerates into chaos. Within this context, the Maoist tradition continues to win allegiance and gain supporters and its policies and values provide a full repertoire from which leaders can enforce orthodoxy, break or reverse movement toward change and reform, and limit the country's full integration into the world community.

A significant portion of the population, particularly the younger and better educated urbanites, no longer subscribes chapter and verse to Maoist teachings. Yet during difficult times even they probably respond to the familiar security provided by the authoritarian, centralized model created under Mao's tutelage. The generation now in office was heavily exposed to the Maoist era political campaigns and indoctrination, and no doubt these influences remain.

There are press reports that the study of Mao's works again is being emphasized and undertaken in some of the educational institutions. A university symposium organized around the theme "the quest for Mao Zedong" was convened in February 1989.[16] Photographs and songs about Mao's famous exploits are for sale in shops. New works and films are being produced showing Mao's all-encompassing role in the revolution. An author writing in *Renmin ribao* in July described Mao Zedong Thought as no less than "the spiritual pillar maintaining the unification of our nation state." [17]

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[15] Ibid., p. 31

[16] "From 'Sartre Craze' to 'Mao Zedong Craze,'" *Renmin ribao* (overseas edition), March 1, 1990, translated in FBIS *Daily Report: China* (March 25, 1990), pp. 1-2.

The increased urbanization of the population and the exposure to media that promote diversity in thought and experience probably will continue to erode the power of the Maoist tradition, but this is a gradual process. It is generally recognized that China needs to act swiftly and with flexibility to develop the economy and improve the lives of the people. Another challenge to China's leaders is the confrontation with Western values and concepts that accompany modern scientific and technical knowledge and introduce flexibility and innovation. These challenges severely tax the integrative capacity of China's current political system and leaders. China's land mass and population are burden enough to slow growth and cultural integration without having also to cope with retrograde political traditions.

The debilitating and regressive effects of Mao's political legacy will continue to operate and impair China's development until the political system is rid of the residual influences of Mao's personality cult. This feature of the Maoist tradition centers power in charismatic individuals, sometimes regarded as "saviors", and undercuts the legitimate powers of others serving in office. Countering the cult requires that those in office be awarded the powers of their office, but that fixed terms of office holding be established. This is to prevent any leader, over time, from acquiring unusual personal powers that can distort the functioning of leadership that is working collectively and practicing a balanced version of democratic centralism in guiding China's future. Without these changes, the Maoist political tradition, or the practice of people following a personality cult, will continue to inhibit and disrupt China's plans for stability and development.

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[17] Jin Huiming, "The Precious Wealth of the Party and People ..." *Renmin ribao*, (July 20, 1990), translated in FBIS *Daily Report: China* (July 30, 1990), p. 27.

IV. MODERNIZATION

A. Agriculture

OVERVIEW

By William H. Cooper [*]

Accounting for about one-third of GNP and two-thirds of the labor force, agriculture is a critical sector in the Chinese economy.[1] One could assert that as agriculture goes, so goes the rest of the Chinese economy. Indeed, when Chinese policymakers launched economic reforms in the 1970s with the "four modernizations," they focused on agriculture to give the economy a jump start.

During the last several years, reform of China's agriculture has lagged and, in some cases, has gone in reverse. China's economic decisionmakers appear to have reached a critical juncture with implications for the future of Chinese agriculture in particular and the economy as whole. They must decide whether to continue with the retrenchment of the late 1980s, that is, reverting to the old ways of conducting agriculture policy, or to once again bring market forces into play, and with them, a degree of economic rationality.

The five papers that are presented in this section address the issues of agricultural reform in China and the prospects for Chinese agriculture in the 1990s. Two of the papers—one by Terry Sicular and one by Shwu-Eng Webb and Francis Tuan—provide analyses of problems and prospects for Chinese agriculture as a whole. The other three papers examine specific aspects of Chinese agriculture. Frederick Crook's paper analyzes China's grain economy, Leo Orleans's contribution focuses on land use policy in China, and David Zweig's paper analyzes Chinese rural industries.

Both the Sicular and Webb-Tuan papers cite vast improvements in the agricultural sector in the early 1980s and attribute these improvements to the rather bold reform measures Chinese policymakers undertook in the late 1970s to early 1980s. These measures were designed to reduce the role of administrative controls and to increase the role of market forces in determining the allocation of resources in the agricultural sector. The reforms consisted of breaking up huge collective farms into smaller plots and establishing a household contract system under which individual households would have more control over production and output distribution for their farms. Thus, the farmers would determine what they would produce and how they would dispose of the output after meeting tax and quota sale obligations to the state. At the same time, the state diminished its reliance on mandatory production targets in agriculture and allowed farmers to make decisions based on profitability and other economic criteria. Webb and Tuan point out that agricultural productivity surged in the early 1980s. So did the diversification of agricultural production as farmers were given more leeway in what they produced. In their paper, Webb and Tuan attribute overall improvements in Chinese economic growth and living standards in the early 1980s to improvements in agriculture.

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[1] Figure derived from data found in The Economist Intelligence Unit—1988-89. *Country Profile: China, North Korea.* p. 17, 24.

But after 1984, the fortunes of Chinese agriculture declined. For example, the gross value of agriculture output, which had been growing at average annual rates of in the early 1980s of 8-9 percent, grew only 3-4 percent after 1984 (Sicular). Why the decline occurred is a point of difference between the Sicular and Webb-Tuan treatments of Chinese agricultural reforms. Webb-Tuan blame the downturn in agriculture on the limited scope of the reforms and on how the reforms were implemented. Sicular, on the other hand, blames policies that Chinese decisionmakers imposed subsequent to the reforms.

Webb and Tuan argue that the Chinese have not reformed their legal system to allow the agricultural reforms to operate fully. For example, Chinese law and the legal system could not deal with contract disputes and property rights—legal concepts that are fundamental to the operation of the household contract system. As a result, according to the authors, households have not felt secure in investing in their farms but have spent profits on current consumption that has inhibited the development of agriculture. In addition, when the government established the household contract system, it divided the collective farms into small plots that Webb and Tuan claim were inefficient. The land tenure rights of the farmers have been ambiguous, reducing incentives to invest. Furthermore, a policy of double track pricing (charging different prices for urban dwellers and rural dwellers) and the continued practice of subsidizing food supplies in the urban areas prevented a mature market system for agricultural products from developing and discouraged agricultural production.

Sicular, on the other hand, while recognizing some of the weaknesses of the implementation of the economic reforms, argues that they were not the cause of the abrupt downturn in agricultural production after 1985. Rather she points to policies in three areas as contributing to the downturn: agricultural pricing, investment in agriculture, and the promotion of rural industries. In the area of pricing, Sicular blames the adoption of a proportionate system of state procurement prices for agricultural products. The system was designed to lower the average price the state would have to pay for each unit in order to reduce severe budget deficits and to curtail production that had reached oversupply levels. Proportionate pricing was a shift from an early reform pricing policy using a two-tier pricing system to stimulate production—one set of prices for sales made within quotas and a second set of higher prices for above-quota sales.

Sicular argues that the reversion to a proportionate pricing system—half way between the two sets of prices—lowered marginal revenue and led to farmers decreasing production to levels below what the government expected. The result was the overall downturn in agricultural output.

In the area of investment, Sicular asserts that private and local government investment failed to replace the decline in central government investment in agriculture. Private investors, for example, put their money in rural enterprises and housing rather than in farms as Chinese policymakers had expected which affected agricultural productivity. Sicular also blames agricultural problems on Chinese government programs to promote the development of rural industries, that is, nonagricultural production in the rural areas. Lending policies were revised to give agricultural financial institutions more latitude in lending decisions. Because of the surging profitability of rural enterprises, the financial institutions diverted investments from farms to the rural enterprises, depriving the farms of needed capital. In addition, workers became attracted to rural enterprises, diverting human resources away from the farms as well.

The Chinese government responded to the problems in agriculture by reverting to old methods of agricultural management and abandoning some of the reforms. The government has increased its use of mandatory deliveries, thus reducing the discretion of the farmers to dispose of their output and returning some control back to the hands of the central authorities. And the government has instituted policies to encourage the growth of grain crops and waged a campaign against privately owned rural industries. The government succeeded in establishing some degree of economic stability. But, the long-term prognosis for Chinese agriculture remains an open question, the answer to which depends in large part on whether the Chinese return to a path of economic reforms or return to the inefficient policies of old.

The rural industries have become an important element of Chinese economy and a subject worth special attention when considering the future of Chinese agriculture. According to David Zweig, rural industries consist of enterprises, firms, hotels, and shops that are cooperatives, private establishments, and enterprises run by the local governments. They encompass a broad range of goods and services, such as household appliances, textiles, farm machinery, food, and energy, among others. Dating from the mid-1950s and Mao Tse-tung's "Great Leap Forward" program, the rural industries have long been a staple in Chinese agriculture. They were once considered ancillary to urban production and a means of employing surplus labor without placing more demands on the overburdened urban sector. But rural industries now account for over 25 percent of Chinese industrial production. Zweig implies that the success of the rural industries results from their relative independence from central authorities.

However, as with the rest of the economy, rural industries have been subjected to the vagaries of policymaking at the center—at times encouraged, other times constrained. To reduce the competition with state-run enterprises in urban areas, the government's present retrenchment program has included a campaign to reign in rural industrial activity by curtailing central government credits and restricting access to raw materials supplies. As a result, the rural industries have contracted.

Zweig concludes that rural industries will remain a staple in the Chinese economy and a barometer of official thinking on reform in agriculture and in the economy as a whole. Chinese leaders are once again acknowledging the importance of rural industries as stimuli to manufacturing and as earner of hard currency. However, the rural industries will likely present problems in the future for Chinese policymakers. Among these problems, Zweig indicates the tendency of rural industries to exacerbate regional inequalities in economic development and the competition they exert for raw materials and other resources with state-run industries.

Along with the rural industries, another significant element of Chinese agriculture is grain production. As Frederick Crook explains in his paper, China is the world's largest grain producer. The future of grain production has implications for the Chinese economy and for international grain markets. Crook outlines two general scenarios for Chinese policy in the grain economy for the foreseeable future. The first is one in which the government makes no changes in policy, that is, the government largely determines the size and composition of grain production and distribution. The second is one in which the government reforms the agricultural sector to allow market forces—namely market-determined prices—to make those determinations. The author analyzes the implications of the two scenarios for various aspects of the grain economy—land availability, yield and production, marketing, grain reserves, consumption patterns, and foreign trade.

In some cases the implications of the two scenarios differ very little. For example, technical and natural resource limitations will constrain grain yield and production no matter which road the Chinese take, according to the author. However, prices for grain and, consequently, consumption of grain would differ under the two scenarios.

From the U.S. perspective, perhaps one of the most important implications would be for trade, since China is an important market for U.S. wheat. Under the "no change" scenario, Crook forecasts a decline in grain exports as domestic demand for cereals and feedgrains would grow. At the same time, such a scenario would lead to an expansion of grain imports as the government would maintain low, fixed prices for food in the urban areas that would require a replenishment of urban stocks from foreign sources. Under the "reform" scenario, lifting of government controls would permit regional diversities to emerge in grain production.

Perhaps central to the prospects for Chinese agriculture will be how the Chinese policymakers address the problem of diminishing availability of cultivated land. While China has made impressive gains despite the loss of cultivated land, the land crisis, as Leo Orleans describes it in his work on the issue, constrains agricultural productivity and the Chinese will have to develop policies that limit losses and make better use of the land that is available.

In underscoring the significance of the land crisis, Orleans notes that between the early 1950s and mid-1980s, cultivated land per capita declined 50 percent in China. While the rapid growth in the Chinese population contributed to this trend, the absolute loss in cultivated land was also a major factor. Orleans attributes the loss to a number of factors: the growth in urban population and industrial development that has encroached on rural areas; an expansion in rural housing and enterprises that have encumbered land that could be used to grow food; hoarding of land by urban and rural occupants, preventing precious land from being efficiently used; and an underdeveloped legal system that does not adequately define property rights and tenure.

The author attributes the loss of cultivated land to other policy failures as well, such as environmental problems, some of natural causes, but most of them man-made. Orleans considers deforestation as the primary environmental problem that results in severe soil erosion destroying the fertility of the land. Furthermore, China's land reclamation process, opening virgin lands or returning land to agricultural production, has been of marginal value and unable to compensate for the loss to agriculture of the most fertile lands in the densely populated regions of China.

Because of the constraints imposed by the declining availability of land, Orleans concludes, China must try to protect the existing arable lands and make those lands more productive. The first objective requires stricter control of land-use. The second requires a combination of initiatives both systemic and technological. In the first case, the author believes that household farms should be larger so that they can achieve economies of scale. In terms of technology, the author holds out hope for China to be able to take advantage of existing techniques and technology practiced by advanced developed countries and to develop its own technology, including biotechnology, to improve land productivity.

Clearly, Chinese policymakers face critical decisions on the future of agriculture. From their analyses, the authors of the five papers conclude that China would be best served if it returns to the path towards market-oriented reforms. Whether it heeds that advice appears to be an open question at this time.

CHINA'S AGRICULTURAL POLICY DURING THE REFORM PERIOD [1]

By Terry Sicular *

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SUMMARY

After unprecedented growth in the early 1980s, China's agricultural performance weakened abruptly in 1985 and has stagnated thereafter. Several explanations have been proposed for this slowdown: the exhaustion of one-time gains from decollectivization; the limited amount and uneconomic distribution of arable land under small-scale household farming; and insufficient agricultural investment. This paper argues that such factors were not the primary causes of the slowdown. Rather, government policies enacted in 1983–85 brought about a sudden change in agriculture's fortunes, and the absence of comprehensive countermeasures in ensuing years hindered agriculture's recovery.

In the early 1980s decollectivization and reforms in production planning enhanced incentives and reduced administrative controls over farming. After agriculture's performance began to weaken, increasing attention was given to potential drawbacks of these reform measures. Some have proposed that steps be taken to consolidate farms and reassert control over agricultural production. Administrative intervention by local cadres in farm decision making apparently persists and has probably grown in recent years.

The temptation to rely on administrative interventions remains strong because private economic incentives conflict with government objectives for agriculture. Private incentives were greatly af-

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fected by policy changes in 1984/85 that substantially reduced the relative profitability of agriculture. Farm prices and material incentive awards, which had been raised in the late 1970s and early 1980s, were reduced. Commercial reforms permitted extra-plan sale of farm inputs at high and rising market prices. The government condoned the growth of private rural business and liberalized rural credit policies. These actions diverted rural financial, material, and human resources from agriculture to rapidly developing nonagricultural activities.

Insufficient investment in agriculture was part of the picture, but in large part as an effect rather than as the underlying cause. In the early 1980s the government reduced direct state investment in agriculture with the expectation that this reduction would be offset by growth in local and private investment. Local and private investment in agriculture, however, has not increased as hoped: instead, funds have flowed to more lucrative nonagricultural businesses. Government policies lowering agriculture's relative profitability have contributed to the outflow of resources.

Since 1985 the government has taken steps to bolster agricultural performance, but with limited success. The government raised farm prices and incentives, but the new prices and incentives were not implemented fully at the local level. Moreover, the price increases were too small and outpaced by inflation. The government also increased controls over cultivation and imposed restrictions on market trade of farm products. These steps, however, only enhanced the relative attractiveness of the many nonagricultural activities not subject to such restrictions.

Government policies in the mid- and late 1980s thus placed agriculture at a disadvantage. Agriculture's relative standing only began to improve in 1989/90 when the austerity program began to slow the growth of rural industry and services. These developments highlight the close connection between the agricultural and nonagricultural sectors of the economy. Ultimately, China's economic development requires growth of both sectors, which will require that agriculture be given equal footing.

I. INTRODUCTION

During the past decade the Chinese government has undertaken substantial reforms in agricultural policy. These reforms have reduced administrative interventions in the the rural economy, increased reliance on economic 'levers', decentralized economic decision-making, and expanded the role of markets. Mandatory planning of production and procurement have been reduced or eliminated, and direct government investment in agriculture has declined. Increasingly the government has relied on pricing and incentives to guide agricultural production, marketing, and investment.

These measures have been undeniably successful in promoting agricultural growth. Between 1978 and 1989 the gross value of agricultural output (in constant prices) nearly doubled, agricultural productivity and farm incomes rose, and the quality and quantity of food available to consumers improved vastly. Success was most apparent, however, prior to 1985. Since 1984 agricultural performance has weakened: growth in the gross value of agricultural output has fallen from average rates of 8 or 9 percent to average rates of 3 to 4 percent. The slowdown was most abrupt for crop production, output of which dropped in absolute terms in 1985 and stagnated thereafter. (See table 1.)

Table 1. Growth in Gross Value of Agricultural Output*
(percent growth over previous year, comparable prices)

Year	Growth in Value of Agricultural Output	Of which: Crops
1979	7.6	7.2
1980	1.4	-0.6
1981	6.5	5.9
1982	11.3	10.3
1983	7.7	7.9
1984	12.3	9.9
1985	3.5	-2.0
1986	3.4	0.9
1987	5.8	5.3
1988	3.2	-0.5
1989	3.1	1.8

* Includes crops, forestry, animal husbandry, aquaculture, and sidelines.

Source: ZGTJZY, 1990, p. 53.

China's agricultural policy in the 1990s will almost certainly aim at bolstering agricultural, and especially crop production. Effective policies, however, require a clear understanding of the reasons for the slowdown in the late 1980s. Several explanations have been proposed. Some observers argue that the slowdown was unavoidable because agricultural growth had to decelerate as the one-time gains from decollectivization were played out. Some have attributed the slowdown to the declining amount and uneconomic distribution of land. Small family farms with numerous, fragmented plots could not capture economies of scale, and China's limited shrinking arable land area constrained further growth. Others have blamed the slowdown on reduced investment in farming. Certain of these factors undoubtedly weakened agriculture's performance in the late 1980s; however, none of them explain why growth slowed so abruptly in 1985.

This paper presents a different explanation for the slowdown: policies enacted in 1983–85 caused the abrupt change in agriculture's performance. Beginning in 1983 but especially in 1984/85 the Chinese government implemented a set of measures that individually and as a group affected agriculture negatively. These measures included policies directly aimed at agriculture, for example, reductions in the prices and incentives farmers received for deliveries of crops to the state. Equally important, and too often overlooked, were changes in industrial, commercial, and financial policies that had repercussions for agriculture. One such policy change was the 1984 decision to officially sanction the development of private rural enterprise. Concurrently the government allowed rural credit cooperatives to lend more freely to rural industry and services. Together with certain other nonagricultural measures discussed below, these actions caused a flood of resources to flow out of agriculture.

In the wake of such agricultural and nonagricultural policies, agricultural growth declined abruptly and, in the absence of comprehensive countermeasures, remained weak in the years that followed. Inflation hindered agriculture's recovery. Only with the retrenchment in 1989–90, when the environment for nonagricultural activities worsened, did agriculture begin to recover.

The discussion below examines economic policies that contributed significantly to the initial acceleration and consequent slowdown in agricultural growth during the 1980s. The first section discusses decollectivization and production planning. The second section examines procurement and pricing of farm products, and the third section analyzes policies affecting agricultural investment. The fourth section discusses nonagricultural policies that contributed to agricultural trends. The conclusion raises some lessons for policy in the 1990s.

II. DECOLLECTIVIZATION AND PRODUCTION PLANNING

Decollectivization and reforms in production planning are closely related, in that both have affected who makes economic decisions in agriculture. Decollectivization has shifted the basic decision-making unit from the collective farm to the household. Reforms in production planning have changed the degree and nature of administrative control over the basic decision-making unit. These reforms have been given credit for the burst of agricultural growth in the early 1980s; some claim that they also underlie the agricultural slowdown in the late 1980s.

Decollectivization has been treated extensively elsewhere, and so is discussed only briefly here.[2] During the early 1980s the household contracting system, under which land was contracted to individual households who could then make their own input decisions and dispose as they wished of their output after meeting their tax and quota sales obligations to the state, became widespread (see table 2). By linking rewards directly to effort, the contracting system enhanced incentives and promoted efficient production based on economic considerations. One study estimates that the incentive effects of decollectivization may have explained over 70 percent of agriculture's growth between 1978 and 1984.[3]

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[2] See, for example Reeitsu Kojima, "Agricultural organization: New forms, new contradictions," *China Quarterly*, No. 116, Dec. 1988, pp. 706–735.

Reforms in production planning accompanied decollectivization. Prior to 1980 collective farms faced mandatory targets governing sown areas, yields, levels of input applications, planting techniques, and so on. Of these targets, those governing sown area were most important, in part because they were relatively easy to monitor and enforce. During the early and mid-1970s sown area targets governed the planting of all major and many minor crops, and they covered a substantial proportion of cultivated area.

During the reform decade the government moved away from mandatory production planning. The number of production planning targets in agriculture was reduced substantially in the early 1980s.[4] Production planning was now to pay greater attention to local soil and weather conditions, economic considerations, and the desires of producers. As surpluses of grain and other crops emerged in 1983 and 1984, mandatory planning of production no longer seemed necessary, and in 1985 the government announced that mandatory production planning in agriculture was no longer permitted. Thereafter planning targets were to serve only for guidance or reference.[5] Local implementation of the production planning reforms varied, but the overall effect was to reduce the degree of intervention in agricultural economic decisions. These reforms contributed to agriculture's rapid growth in the early 1980s by permitting the diversification of agricultural production, greater regional specialization, and a decline in the previously over-intensive cultivation of grain.

The slowdown in the late 1980s has raised questions about decollectivization and the relaxation of controls over farming. Chinese publications have given increasing attention to the potential drawbacks of the household contracting system.[6] One drawback is that decollectivization may have reduced agricultural investment. Despite ongoing proclamations that decollectivization was correct and announcements extending the length of land contracts, rights to land under the contracting system remain vague. Until farmers feel that they have a permanent, secure claim to the land, they will be reluctant to make long-term investments. Decollectivization also has contributed to a decline in large-scale water conservancy and irrigation projects. With the weakening of collective organizations, water control and irrigation works have deteriorated.

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[3] John McMillan, John Whalley, and Lijiang Zhu, "The impact of China's economic reforms on agricultural productivity growth," *Journal of Political Economy* 97(4), August, 1989, pp. 781-807.

[4] Changes in production planning are discussed in Wu Xiang, "Lianchan chengbao zeren zhi yu nongye guanli," *Zhongguo renmin daxue fuyin ziliao* (hereafter ZGRMDX) 3 (1983), pp. 97,98; "Guowuyuan pizhuan guojia jiwei 'Guanyu gaijin jihua tizhide ruogan zhanxing guiding'," *Renmin ribao* (hereafter RMRB), 10 October 1984; and "Zhonggong zhongyang, guowuyuan guanyu jin yibu huoyue nongcun jingjide shixian zhengce," RMRB, 25 March 1985, section 1.

[5] "Zhonggong zhongyang, guowuyuan guanyu jin yibu huoyue nongcun jingjide shixian zhengce," RMRB, 25 March 1985, section 1.

[6] Kojima, *op. cit.*, pp. 729–730.

Another alleged drawback to the household contracting system is that small, fragmented farms are less productive than large, consolidated farms. This view underlies recent proposals to promote farm reconsolidation as a solution to the current agricultural malaise. Although household labor could undoubtedly be saved if each household's plots were consolidated, it is questionable whether combining small farms into large farms would bring about additional gains. Studies of other countries, and some preliminary evidence from China, have shown that small farms are not significantly less productive than large farms.[7]

Although the government has not reversed decollectivization or rehabilitated mandatory production planning, it has encouraged increased collective leadership by local governments and through the formation of cooperative organizations (*lianheti*). In many places household land contracts now specify the land area that households are required to plant in grain.[8] In some localities village cadres directly manage certain aspects of agricultural production. For example, a county in Shandong has promoted a program called the "five unifieds" (*wuge tongyi*), i.e., unified ploughing, sowing, irrigation, harvesting, and threshing by villages.[9] Implementation of the "five unifieds" requires planning and coordination of agricultural production at the village level.

Measuring the extent of collective management of farm production is difficult. Western field researchers have observed the continued importance of village-level management in some localities.[10] A recent survey carried out by the Ministry of Agriculture's Policy Research Center (table 2) provides more systematic evidence. Although the surveyed villages report that by 1987 over 95% of their land was contracted out to households, the role of collective organizations was apparently still quite large. As late as 1987 40% of the land in these villages was ploughed, 45% of irrigated area irrigated, and roughly one-third of fertilizer, insecticide, and diesel oil inputs supplied in a unified fashion by villages (or groups).[11] The proportion of villages planning crop layout and rotations also remained high: in 1987 63% of the villages set plans for crop layout and rotations, and 58% set plans for farmland basic construction.[12] The importance of collectives in farm management is highest in the eastern regions, where over three-quarters of the land is under unified ploughing and 80% of villages set plans for crop layout and rotations. These statistics suggest that the role of collectives in farm management has declined less than previously thought.

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[7] See Sicular, "Distribution in rural China: Observations from a recent survey in Hubei," unpublished manuscript, Harvard, 1989, and also R. Albert Berry and William R. Cline, *Agrarian Structure and Productivity in Developing Countries*, Baltimore: Johns Hopkins University Press, 1979.

[8] For an example of a household contract in 1989, see Frederick W. Crook, "China's current household contract system (part I)," in USDA, *CPE Agriculture Report* 2(3), May/June 1989, pp. 26–30, and Frederick W. Crook, "China's current household contract system (part II)," in USDA, *CPE Agriculture Report* 2(4), July/August 1989, pp. 27–33.

[9] Author interviews, Zouping County, Shandong Province.

[10] See discussions in Jean C. Oi, "The fate of the collective after the commune," in Deborah Davis and Ezra Vogel, *The Social Consequences of Chinese Economic Reforms*, Cambridge: Harvard University Press, forthcoming; in Jean C. Oi, *State and Peasant in Contemporary China: The Political Economy of Village Government*, Berkeley: University of California Press, 1989; and in Jean C. Oi, "Peasant grain marketing and state procurement: China's grain contracting system," *China Quarterly* 106 (1986), 272–290. Author interviews and observations in Shandong and Hubei also revealed this.

[11] Ministry of Agriculture Economic Policy Research Center Rural Cooperative Organizations Task Force, "Zhongguo nongcun diyu xing hezuo zuzhide shizheng miaosu—quanguo 100 ge xian 1200 ge cun diyu hezuo zuzhi xitong diaocha," *Zhongguo nongcun jingji* 1 (1989), p. 13.

Table 2. Survey Statistics on Collective (Unified) Production and Planning Activities

	1978	1984	1987			
			All	East	Central	West
I. Percent of cultivated area						
A. Under unified management	99.4	5.0	2.4	--	--	--
B. Contracted to households	0.2	93.2	95.7	--	--	--
C. Other	0.4	1.8	1.9	--	--	--
II. Petcent of land under unified ploughing	--	49	40	76	34	20
III. Percent of irrigated land under unified irrigation	--	47	45	85	36	16
IV. Percent of inputs subject to unified supply						
A. Chemical fertilizer	--	56	32	50	30	21
B. Pesticides	--	54	28	51	26	23
C. Diesel oil	--	48	33	65	29	20
V. Percent of villages (groups) setting plans for						
A. Crop layout and rotations	73	64	63	80	52	58
B. Farmland basic construction	73	58	58	38	57	36

"--" indicates no data provided by source.

Notes: 1. These survey data are from 1200 randomly selected villages in 100 counties that are designated "rural economic information" counties. All provinces, municipalities and autonomous regions are covered except Tibet and Hainan.

2. The term "collective" refers to the Chinese term jiti, and "unified" to tongyi. Collective and unified activities are carried out by villages and groups, which this source lumps together using the expression cun(zu).

Source: Ministry of Agriculture Economic Policy Research Center Rural Cooperative Organizations Task Force, pp. 5,12,14.

Involvement of local leaders in the management of farm production is qualitatively different than central planning through vertical channels. Local leaders are more likely to be aware of local conditions and the desires of the farmers. Moreover, certain aspects of agricultural production such as irrigation and basic construction are probably better handled collectively than by households. Nevertheless, village and other local cadres belong to formal governmental bodies, their decisions are likely to be influenced by administrative or political considerations, and they have a tradition of infringing on the decision-making rights of households. The persistence, and in some regions resurgence, of local government involvement in agriculture thus reflects administrative intervention under a new guise.

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[12] It is possible that villages draw up plans but do not seriously enforce them. Even before the reform period, however, village cadres were known not to carry out the official plans.

Increased use of administrative interventions has arisen because of difficulties guiding production using indirect policies. Efforts to influence farm household decisions using prices and incentives have not had the desired effects. Economic incentives continue to conflict with, rather than complement, the government's objectives for agriculture. So long as farm-level incentives and government objectives conflict, farm behaviour will diverge from that desired by higher levels, and the temptation to directly intervene in production decisions will remain strong.

III. PROCUREMENT POLICIES: PRICES, QUOTAS, AND INCENTIVES

In the 1980s China's policy makers relied heavily on pricing, procurement, and related measures to influence agriculture. Such policies can raise farm profits and enhance agriculture's ability to attract resources, and so spur production. The allocation of resources depends, however, not on agriculture's absolute profitability, but on the relative profitability of farming in comparison to alternative pursuits. Nonagricultural developments therefore can, and have, counteracted efforts to encourage agriculture using prices and incentives. Incentive measures have also been hindered by the continued link between pricing and the state budget. Increasing farm prices raises, while reducing prices lowers, government budgetary outlays. In a period of persistent budget deficits, the government has shown greater willingness to lower than raise farm prices.

Major adjustments in procurement policy began in 1978. Initially the basic structure of the procurement system remained unchanged: farm products were subject to mandatory delivery quotas at planned prices, in some cases with a price bonus or other incentive award for beyond-quota deliveries. Adjustments were made, however, in prices and incentives. The government implemented substantial, across-the-board increases in quota procurement prices in 1979 (table 3). In the early 1980s further adjustments in quota prices took place, and seasonal and quality price differentials were widened.[13] By 1983 quota prices for grains exceeded their 1977 levels by 15 to 20 percent, oils and oilcrops by 27 percent, sugar crops by 26 percent, cotton by over 30 percent, and hogs by 27 percent. These price adjustments followed more than a decade of constant quota prices.

The government concurrently expanded bonuses for above-quota deliveries. Prior to 1979 grain and oilcrops had received a price bonus of 30 percent for deliveries beyond the quota level. In 1979 this bonus was increased to 50 percent. Cotton, which had earlier received no above-quota bonus, now began to receive a nationwide 30 percent price bonus for sales to the state exceeding the average quantity delivered over the three year period 1976–78.[14] Price bo-

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[13] Table 3 and Ministry of Commerce Institute of Commercial Economic Research, *Xin zhongguo shangye shigao*, Beijing: Zhongguo Caizheng Jingji Chubanshe, 1984, p. 386.

[14] Price Theory and Practice Editorial Department, *Wujia dashi ji*, Beijing: Zhongguo Caizheng Jingji Chubanshe, 1986, p 386.

Table 3: State Quota Procurement Prices (yuan per ton, standard grade)

A. Grains and Oil Crops

	Indica Paddy	Japonica Paddy	Wheat	Corn	Soyabean	Shelled Peanuts	Rapeseed
1971	196.2		268.6	181.8	326.0	760.0	560.0
1977	196.2		268.6	181.8		760.0	560.0
1978	196.2		272.2	176.0	401.2	760.0	560.6
1979	231.4	297.2	329.6	214.4	461.4	965.8	714.6
1980	231.4	297.2	314.4	214.4	461.4	965.8	714.6
1981	231.4	297.2	314.4	214.4	692.1	965.8	714.6
1982	231.4	297.2	314.4	214.4	692.1	965.8	714.6
1983	231.4	297.2	314.4	214.4	692.1		
1984	231.4	297.2	314.4	214.4	800.0		

B. Economic Crops and Hogs

	Cotton, North	Cotton, South	Sugar Cane	Sugar Beet	Tobacco	Live Hogs (per 100 kg.)
1971	1,869.4	1,869.4	34.6	54.6	1,355.0	95.72
1977	2,116.0	2,116.0	34.6	60.0		98.55
1978	2,304.8	2,304.8	34.6	60.0	1,369.6	98.92
1979	2,765.0	2,655.2	43.7	76.0	1,369.6	125.38
1980	3,031.4	2,921.6	43.7	76.0	1,369.6	125.38
1981	3,065.8	2,956.0	43.7	76.0	1,680.0	125.38
1982	3,065.8	2,956.0	43.7	76.0	1,680.0	125.38
1983	3,065.8	2,956.0	43.7	76.0	1,680.0	125.38
1984			43.7	76.0	1,680.0	125.38

Source: Sicular, "Ten years of reform...," table 3.

nuses for other farm products were also implemented, in some cases by provincial governments.[15] The increased above-quota bonuses were multiplied by the now higher quota prices, so that between 1977 and 1983 above-quota prices rose 36 percent for grains,

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[15] Ministry of Commerce Institute of Commercial Economic Research, *op. cit.*, pp. 391–393

47 percent for oils and oilcrops, and over 80 percent for cotton (table 4).

In addition to the above price measures, the government expanded a variety of material incentive programs under which farmers were awarded the right to purchase low-priced or scarce commodities in return for delivering farm products to the state. For example, in 1978 the central government raised the nationwide award of chemical fertilizers per 100 kilograms cotton delivered to the state from 35 to 40 kilograms, and starting in 1979 also gave farmers in cotton-growing areas 100 to 200 kilograms grain at the low, urban retail price. Similar incentive programs applied to grain, oilcrops, sugarbeet, sugarcane, hemps, and tobacco. By the early eighties the overall number of material incentive programs and the quantities of items awarded had grown quite large. According to incomplete statistics, products eligible for encouragement grain awards numbered 206 at the end of 1981, as compared to only 68 in 1971.[16] The quantity of grain supplied under encouragement sales programs rose to an historical high of 24 percent of total state grain procurements in the early 1980s.[17]

The price and incentive measures described above were accompanied by a gradual reduction in quota levels and in the overall scope of procurement planning. Quota levels for some products, most importantly grain, were lowered. Between 1978 and 1982 the national grain quota and tax was reduced by 20 percent (table 5).[18] Efforts were also made to adjust the geographical distribution of quotas to permit greater regional specialization. Finally, the number of farm products subject to centrally planned procurement and distribution was reduced, while the number of products handled by lower level governments or traded on free markets was increased. As early as 1978 the government began to encourage the revival of rural markets. By 1980 all products except cotton were allowed on the market after state delivery quotas were fulfilled.[19] By 1982 restrictions on private long-distance trade had been lifted for all farm products allowed on markets except grain, and private individuals were permitted to specialize in transport and trade.[20] The expansion of free markets provided an alternative channel for the sale of farm products, often at prices exceeding those offered by the state.

The government participated in market trade through "negotiated price" procurement (*yijia shougou*). The state commercial system bought and sold beyond-quota farm products at the negotiated prices, which, according to central directives, were to be agreed upon jointly by both sides, to apply to voluntary above-quota deliveries, and to be decided on the basis of regional, yearly, seasonal, varietal, and quality considerations. These prices were to follow trends in demand and supply, but were in general not to

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[16] Ministry of Commerce Institute of Commercial Economic Research, *op. cit.*, p. 394.

[17] *Ibid*, and An Xiji, "Lun woguo nongchanpin jiage tizhi gaige yu jiage zhengce tiaozheng," *Nongye jingji wenti* (hereafter NYJJWT), Number 10 (1985), pp. 23–24, 26.

[18] Producers also faced obligatory above-quota deliveries, but information is not available on the level of or changes in these obligations.

[19] An Xiji, *op. cit.*, p. 24. Substandard cotton was permitted on the market in the early 1980s, but prohibitions on graded cotton remained.

[20] Price Theory and Practice Editorial Department, *op. cit.*, pp. 137–38; "CPC document no. 1 on rural economic policies," Foreign Broadcast Information Service, *Daily Report* 1(072), K6–8.

Table 4: State Above-quota and Contract Procurement Prices* (yuan per ton)

A. Grains and Oil Crops

	Indica Paddy	Japonica Paddy	Wheat	Corn	Soybeans	Shelled Peanuts	Rapeseed
1971	255.1		349.2	236.3	423.8	988.0	728.0
1977	255.1		349.2	236.3		988.0	728.0
1978	255.1		353.9	228.8	521.6	988.0	728.8
1979	347.1	445.8	494.4	321.6	692.1	1,448.7	1,071.9
1980	347.1	445.8	471.6	321.6	692.1	1,448.7	1,071.9
1981	347.1	445.8	471.6	321.6	692.1	1,448.7	1,071.9
1982	347.1	445.8	471.6	321.6	692.1	1,448.7	1,071.9
1983	347.1	445.8	471.6	321.6	692.1	1,255.5	929.0
1984	347.1	445.8	471.6	321.6	600.0	1,255.5	929.0
1985	312.0	401.0	424.4	289.4	600.0	1,255.5	929.0
1986	312.0	401.0	424.4	289.4/316.4	692.1	1,255.5	929.0
1987	312/342	401/436	424.4	289.4-336.4		1.448.7	929.0
1988	312/352	401/446	454.4/484.4	289.4-336.4		1,448.7	1000.4

B. Economic Crops

	Cotton, North	Cotton, South	Tobacco
1971	1,869.4	1,869.4	1,355.0
1977	2,116.0	2,116.0	
1978	2,304.8	2,304.8	1,369.6
1979	3,594.5	3,451.8	1,369.6
1980	3,940.8	3,798.1	1,369.6
1981	3;985.5	3,842.8	1,680.0
1982	3,985.5	3,842.8	1,680.0
1983	3,985.5	3,842.8	1,344/2,016
1984	3,665.4	3,310.7	1,344/2,016
1985	3,576.8	3,310.7	1,392/2,088
1986	3,488.1	3,310.7	1,392/2,088
1987	3,576.8	3,399.4	1,497/2,246
1988	3,576.8	3,576.8	

* 1971-1984 prices are above-quota prices; 1985-88 prices are the new contract prices.

Source: Sicular, "Ten years of reform...," table 4.

exceed local market prices.[21] The revival of negotiated price trade gave the state commercial system more flexibility in responding to market conditions and provided a lever for influencing the market.

Table 5: Marketing and State Procurement of Grain (million tons trade grain)

	(1)			(2)	(3)	(4)	(5)
	Marketed Grain:[a]						
	Total	% to State	% to Market	State Procurement[b]	Planned Quota or Contract[c]	(3)÷(2)[d]	Share of Procurement at Quota/Contract Prices[e] (%)
1977	47.67	100.0	0.0	47.67	37.75	.79	
1978	50.73	100.0	0.0	50.73	37.75	.74	
1979	60.10	95.8	4.2	57.57	35.00	.61	63
1980	61.29	93.1	6.9	57.07	34.33	.60	58
1981	68.46	92.4	7.6	63.24	30.38	.48	50
1982	78.06	92.4	7.6	72.09	30.32	.42	50
1983	102.49	94.4	5.6	96.74			35
1984	117.25	91.7	8.3	107.48			29
1985	107.63	84.2	15.8	90.62	75		
1986	115.16	83.5	16.5	96.15	60.75	.63	67
1987	120.92	82.0	18.0	99.20	50.0	.50	57
1988	119.95				50.0		
1989	121.38				50.0		

Notes:

a. Data are for the calendar year. Percentage sold to the state is calculated using data in column (2); the remainder is assumed to be sold on the market.

b. Includes purchases by state commercial departments and supply and marketing cooperatives. Data are probably for the calendar year.

c. Data prior to 1985 are for the state procurement quota and tax, and from 1985 on are for the planned level of contract procurement. These data are for the production year (April of the current year through March of the following year).

d. These numbers are approximate, as the data in column (2) are for the calendar year, and in column (3) for the production year.

e. 1979-84 shares are given by Dangdai Zhongguo Liangshi Gongzuo Editorial Committee. 1986-87 shares are estimated by the author. Contract procurement for these years is estimated as state procurement minus negotiated-price procurement (ZGSYNJ, p. 33), and the share is calculated accordingly.

Sources:

Sicular, "Ten years of reform...," table 5.
Dangdai Zhongguo Liangshi Gongzuo Editorial Committee, Dangdai zhongguo liangshi gongzuo.
Beijing: Zhongguo Shehui Kexue Chubanshe, 1988, p. 178.
ZGSYNJ, pp. 33, 659.
ZGTJZY 1990, p. 85.

The commercial reforms in the late 1970s and early 1980s successfully promoted agricultural growth, but they also led to expanding budgetary outlays on trade in farm products. As production expanded the government found itself buying ever-increasing quantities of farm products at the higher, above-quota prices. The share of procurement at quota prices declined dramatically, in the case of grain, from 63 percent in 1979 to only 29 percent in 1984 (table 5).[22] Meanwhile, the government continued to sell farm products at low ration prices. State retail prices of grain had not changed since the 1960s and had already been lower than quota prices before the 1979 price increases. The combination of rising procurement costs and low, unchanged retail prices generated growing price subsidies on state commerce in farm products. Attempts were made to stem these subsidies by raising retail prices for nonstaple foods like meat and vegetables; however, increases in retail prices were invariably accompanied by income supplements or wage increases for urban residents, the costs of which offset subsidy reductions.[23]

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[21] Wang Dahuai, "Nongchanpin jiage zhishi jiangzuo: Liangshi he youliao jiage (shang)," *Jiage lilun yu shijian* (hereafter JGLLYSJ) 2 (1985), pp. 50–53.

[22] Above-quota procurement, conversely, rose from 37 percent in 1979 to 71 percent in 1984.

By the mid-1980s budgetary losses from price subsidies on farm products grew to a critical level. In 1984 price subsidies on grain, oilcrops, and cotton had reached 20 billion yuan, equal to 14 percent of total government revenues.[24] Similar subsidies also existed for other farm products and on foreign trade in farm products.

Growing budgetary costs prompted an overhaul of procurement policy. First, the government abandoned the two-tiered quota/above-quota pricing system and instituted a single, "proportionate" procurement price for each crop. The new proportionate prices were weighted averages of the old quota and above-quota prices, with the weights varying somewhat by region and crop. Proportionate pricing was implemented for oilcrops in 1983, for cotton in 1984, and for grain in 1985. The new grain price was set equal to 30 percent of the quota price plus 70 percent of the above-quota price (*dao san qi*).[25] Proportionate pricing stopped the upward drift in the costs of procurement as above-quota deliveries expanded. It also eliminated the incentive to evade quotas in order to receive higher above-quota prices.

Second, on January 1, 1985, the Chinese government announced that, except for a few products, it would do away with the old procurement system and no longer send down mandatory delivery quotas to farmers. For grain and cotton, mandatory quotas were to be eliminated and replaced by a combination of voluntary contract and market purchases. State commercial departments were to negotiate purchase contracts with farmers before the sowing season: the contract prices would be set at the new proportionate prices, and farmers could choose freely whether or not they wished to sign contracts with the state or dispose of their products on the market. The state no longer promised to purchase grain and cotton beyond the contract amount. Only if market prices fell below the old quota price would the state guarantee to buy additional grain, and then it would only pay the old quota price.

Planned procurement of other farm products was to be gradually eliminated and replaced by market allocation. State commercial departments thus would increasingly buy and sell at market or near market prices. Through market participation the state would meet its needs for continued planned supply to urban areas, to industry, and for export. Through market participation the state would also exert influence on market trends.[26]

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[23] Terry Sicular, "China: Food pricing under socialism," in Terry Sicular, ed., *Food Price Policy in Asia: A Comparative Study*, Ithaca: Cornell University Press, 1989; Price Theory and Practice Editorial Department, *op. cit.*, pp. 30–31, 34–35.

[24] State Statistical Bureau, *Zhongguo tongji nianjian* 1990 (hereafter ZGTJNJ), Beijing: Zhongguo Tongji Chubanshe, 1990, p. 244, and ZGTJNJ 1989, pp. 748–749. Official statistics for government revenue include government borrowing. Since government borrowing is not considered a form of revenue in Western definitions of budgetary revenues, I have subtracted borrowing from the official revenue data before calculating these percentages.

[25] JGLLYS 4 (1985), p. 51.

If fully implemented, the 1985 reform would have eliminated mandatory state quotas, drastically reduced the scope of commercial planning, and greatly expanded the role of markets in allocation and price determination. Together with concurrent reforms on the retail side, they would also have reduced budgetary outlays on state commerce. This budgetary objective would be accomplished both by establishing a maximum level of state outlays on the procurement of farm products, and by reducing the scope of low-priced state sales. For all farm products except grain, oils, and cotton, both state purchases and sales were eventually to take place at market prices.[27] For grain and oils, planned supplies to urban residents were to continue at unchanged, low prices, but starting in 1985 sales of grain in the countryside were to take place at the higher, proportionate procurement prices.[28] Since in the early 1980s government resales of grain in rural areas had exceeded 40 percent of state grain procurements, the budgetary savings from raising rural sales prices were potentially substantial.[29]

Although the 1985 reforms were meant to slow growth in agricultural output and reduce government procurement of farm products, subsequent declines in crop production and deliveries exceeded expectations. Cotton deliveries fell from 6 million tons in 1984 to only 3.5 million tons in 1985, and grain deliveries from 107 to 91 million tons. These delivery levels were well below the expected amounts: contract-price deliveries of cotton were only 70 percent, and of grain only 72 percent of the totals promised under contracts signed.[30] (See table 5.)

Price and incentive reforms undoubtedly contributed to these trends. The shift to proportionate pricing, although designed to maintain the average prices paid for deliveries to the state, effectively lowered marginal prices. Marginal prices—the prices received for additional output or sales—determine the profitability of increasing or decreasing production levels. Previously farmers received above-quota prices for additional deliveries; now they received proportionate prices. The proportionate prices were lower than the old above-quota prices by about 13 percent for oilcrops, 10 percent for grains, and 12 to 14 percent for cotton (table 4). The switch to proportionate pricing therefore discouraged farm production, and, together with low market prices in 1983 and 1984 due to oversupplies of farm products, adversely affected expectations about the potential for profits from farming.

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[26] *Ibid.*

[27] When subsidiary food prices were raised in 1979, some of the budgetary savings were offset by wage increases to protect urban living standards. With the release of hog and pork prices in 1985, the state announced that it would give urban residents a subsidy or income supplement (Price Theory and Practice Editorial Department *op. cit.*, p. 252).

[28] *Ibid.* pp. 252–53.

[29] "Taolun nongye ruhe guanqie yi jihua wei zhu, shichang tiaojie we bu," ZGRMDX 15 (1982), p. 75. Some portion of these sales were probably at negotiated prices.

[30] Terry Sicular, "Ten years of reform: Progress and setbacks in agricultural planning and pricing," Harvard Institute of Economic Research Discussion Paper No. 1474, March, 1990, pp. 20–21, and footnotes 55 and 56. Note that these percentages overstate the degree of contract fulfillment, as some beyond-contract procurement occurred at contract prices. For example, in 1987 total grain procurement at the contract price exceeded by 7 percent procurement in fulfillment of the contract responsibility. See Almanac of China's Commerce Editorial Committee, *Zhongguo shangye nianjian 1988* (hereafter ZGSYNJ), Beijing: Zhongguo Shangye Chubanshe, 1988, pp. 55, 659.

Concurrent reductions in material incentive awards reinforced the negative effects of price measures. In 1985 grain incentive awards for cotton deliveries were eliminated, and chemical fertilizer awards were to apply only to within-contract, and no longer to beyond-contract, cotton deliveries.[31] Furthermore, in 1985 the price of grain supplied under material incentive programs was raised from the old quota price to the higher proportionate price.

Declines in production and deliveries led the government to back away from some of its 1985 initiatives. Voluntary contracts for grain soon became mandatory. Numerous local reports confirm that delivery contracts were indeed obligatory quotas under a new name.[32] Problems with grain procurement also prompted greater administrative intervention in free markets. To ensure contract fulfillment, local governments closed markets during the procurement seasons and blocked trade of farm products across administrative boundaries.[33]

In 1987 and 1988 the central government imposed further restrictions on markets as part of the effort to slow inflation. Measures taken included allowing local governments to set ceilings and floors on free market prices of grain, oils, animal products, vegetables, and other farm products. In some regions the central government established responsibility systems with local governments for control of the retail price index.[34] In 1988 the State Council issued a decision that starting in the Fall, 1988, procurement season, procurement of rice would be subject to monopoly by the Ministry of Grain. Other departments, units, and individuals were not permitted to supply rice.[35]

The government also began to improve incentives for crop production. Over the two years 1986 and 1987, the central government reduced nationwide planned delivery contracts for grain by one-third (table 5). Although in part a practical step in response to the unrealistically high 1985 contract target, the contract quota reductions were also meant to allow farmers to sell more grain at negotiated and market prices. Furthermore, in 1987 the central government reinstituted material incentives for contract deliveries of grain and cotton. For grain, the "three link" (*san guagou*) policy awarded cash advances and tied sales of high-grade chemical fertilizer and diesel oil at low state list prices for contract deliveries. Similar "link" awards were instituted for cotton and certain other crops.[36] The amounts of these material awards were increased further in 1988 and 1989.[37]

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[31] Price Theory and Practice Editorial Department, *op. cit.*, p. 186.

[32] Lu Wen, "Dangqian nongcun gaige zhongde sange zhongyao maodun," ZGRMDX 23 (1985), pp. 33–35; Jean C. Oi, "Peasant grain marketing and state procurement. . ."; Liu Wenbao and Zheng Xinwu, "Wanshan liangshi hetong dinggou zhidude tujing," NYJJWT 11 (1986), pp. 60–61; Institute of Development General Topics Group, "Nongmin, shichang, he zhidu chuangxin: Baochan daohu banian hou nongcun," *Jingji yanjiu* (hereafter JJYJ) 1 (1987), pp. 3–16; "State urged to improve purchasing of grain," *China Daily*, 26 November 1988, p. 1; author interviews in Shandong, Hubei, Guangdong.

[33] Reports of restrictions on marketing can be found in Institute of Development General Topics Group, *op cit.*, pp. 1–16; Liu Wenbao and Zheng Xinwu, *op.cit.*; and Zhan Zhongde and Zhao Huazhou, RMRB, 3 July 1989, p. 5.

[34] "1987 nian wujia shangzhang qingkuang fenxi ji jiage gaigede zhuyao cuoshi," JGLLYSJ 3 (1988), p. 59, and "Guojia Wujia Ju tongzhi jiaqiang liangshi shichang jiage guanli," JG JGLLYSJ 3 (1988), pp. 52, 54.

[35] "Guanyu wending liangshi shichangde jueding," JGLLYSJ 12 (1988), p. 55.

The government began to raise contract procurement prices in 1986 (table 4). In contrast to the dramatic, across-the-board procurement price increases of the early 1980s, the price adjustments of the late 1980s were modest, occurred gradually, and applied only to particular products in particular regions. Overall, the price adjustments in 1986–88 raised grain and oilseeds contract prices by between 8 and 16 percent over their 1985 levels in the regions where they applied. For cotton, as of 1988 the contract price in the North had recovered to its 1985 level, and in the South was 8 percent higher than in 1985. The state implemented additional price increases in 1989, including an 18 percent rise in grain contract prices.[38]

The intent of these quota, incentive, and price measures was to revitalize farm production and encourage deliveries to the state. Crop production and deliveries, however, did not respond (tables 1, 5). One reason is that local implementation of these measures was uneven. Local meddling with the "three link" incentive program has received considerable attention in the Chinese press.[39] Local governments did not supply, and farmers did not receive, the promised inputs. A nationwide survey of over 10,000 farm households revealed that in 1987 tied sales of fertilizer and diesel fuel for grain contracts were 20 percent below levels promised in central directives. Cash advances were only 86 percent of the stipulated amounts.[40] Local governments also did not pay farmers the prescribed prices in a timely way. In 1987 and 1988 local governments issued IOUs (*da bai tiaozi*) to farmers instead of paying them cash. One article estimates that in 1988 the nationwide average debt owed farmers for each 100 yuan deliveries of farm products was 20 to 40 yuan.[41] These debts often remained outstanding for several months or longer, in some cases for up to a year.[42] Such practices seriously eroded farmer confidence in government policies.[43]

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[36] The national "three link" program for grain awarded 6 kg. good quality fertilizer, 3 kg. diesel oil, and a 20 percent interest-free cash advance for each 100 kilograms contracted grain (ZGSYNJ, p. 54–55).

[37] In 1989 fertilizer awards were reportedly raised to 15 kg. per 100 kg. for contract deliveries of paddy and soybeans, and to 10 kg. for wheat and corn (USDA, *China Agriculture and Trade Report*, 1989, p. 8). In 1988 cotton began to receive 5 kg. diesel oil per 100 kg. deliveries (author interview).

[38] Adi Ignatius, "China unveils raft of austerity moves to cool the economy," *Asian Wall Street Journal Weekly*, 27 March 1989, pp. 1, 11.

[39] "Jianjue luoshi liangshi hetong dinggou 'san guagou' zhengce—guojia jingwei fuzhuren Ye Qing jiu guowuyuan jingji tongzhi da benbao jizhe wen," RMRB, 2 July 1987, 2; Wang Shiqiang, "Jiangshou huafei weihe duixian buliao"; and Yao Guang, Jie Guozhi, *et al*, "Mian jiang huafei buneng kong dui kong," *Jingji cankao*, 13 May 1987. 1986 Document No. 1 also refers to this problem.

[40] Central Rural Policy Research Office Rural Survey Office, "Nongcun gaige yu nongmin," NYJJWT 8 (1988), p. 49.

[41] The estimates of debt owed farmers are from " 'Pay up' call on IOUs to farmers," China Daily, 10 January 1989, p. 3, which quotes an article in *Nongmin ribao*.

[42] Hou Shoulong, Han Ku, and Lu Huaifu, "Lingren youside baitiaozi," RMRB, 8 Aug. 1989, p. 6; Hao Wenkai and Tang Kunran, "Shou zhu da baitiao, nongmin shoubuliao," RMRB, 5 August 1989, p. 6; Zhan Zhongde and Zhao Huazhou, "Tougou fengshou kan 'shengwen',"RMRB, 30 July 1989, p. 5.

[43] The actions of local governments often reflected real obstacles faced at the local level. In the case of "link" incentive sales, for example, the central government had apparently not given local governments supplies of inputs sufficient to meet their tied sales obligations. In 1987 the central government only gave Henan province half the amount of fertilizers it needed to fulfill

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In addition, the increases in contract prices were inadequate. At best the 1988 price adjustments only raised contract prices back to the level of above-quota prices before 1985. For many crops in many regions, contract prices in 1988 remained lower than the old above-quota prices. Only in 1989 did contract prices begin to exceed the old above-quota prices, and then only for some crops in some regions. While contract prices were just regaining their previous levels, market prices were rapidly rising. Inflation far outpaced contract price increases: between 1984 and 1988 the price level rose 47 percent.[44] Inflation caused the gap between contract and market prices to widen considerably. Chinese publications report that by 1988, market prices for grain were three to four times higher, and for oilseeds 18 to 63 percent higher, than contract prices.[45] Under these circumstances, the contract price increases had little effect.

IV. POLICIES ON AGRICULTURAL INVESTMENT

One explanation given for the slowdown in agriculture is insufficient investment. Available evidence indeed suggests that the level of agricultural investment grew slowly, and that, since farm output rose substantially, the rate of investment in agriculture declined. The reasons behind lagging investment are twofold: first, during the early and mid-1980s the government reduced direct state investment in agriculture, and second, local and private investment did not expand as hoped. Initially private resources were used for housing construction rather than productive investment. Even after the housing boom began to slow, however, agricultural investment still did not increase sufficiently. Reductions in crop prices and incentives and policies increasing off-farm opportunities drove local investment funds, along with other financial, human, and material resources, towards more profitable nonagricultural activities.

Table 6 presents available data on government investment in agriculture. State budgetary outlays on basic agricultural construction declined from levels of 5 to 6 billion yuan a year in the late 1970s to between 3 and 4 billion yuan in the mid-1980s. Agriculture's share of government outlays on capital construction fell from over 11 percent to less than 7 percent.[46] As costs of construction rose during these years, the reduction in real investment was even greater.

The government reduced direct investment with the expectation that pricing and incentive policies would elicit substantial local and private investment. Higher prices would increase the returns

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tied sales obligations for its 1987 cotton contract responsibility. Henan's provincial and local governments made efforts to make up the difference by purchasing higher-priced fertilizer on the market and subsidizing the price differential; this raised supplies to 70 percent of tied sales obligations. Similarly, the central government's drastic reduction in credit allocations during 1988 and 1989 contributed to the use of IOUs. Banks did not lend local procurement departments funds adequate to carry out procurement, and so they resorted to IOUs. See Sicular, "Ten years of reform. . .," pp. 30–32.

[44] This is calculated using the national retail price index. ZGSYNJ, p. 837, and *Zhongguo tongji zhaiyao 1989* (ZGTJZY), p. 89.

[45] Sicular, "Ten years of reform. . .," table 6; Liu Dizhong, "Snow gift encourages big harvest," *China Daily*, 12 January 1989, p. 1; and China Daily, 1 April 1988, p. 3.

[46] These data do not include extra-budgetary outlays on agricultural basic construction, which data are unavailable. Note that these data are different than those cited by some other authors. See table 6 for an explanation of the data definitions.

Table 6. Government Budgetary Appropriations for Investment in Agricultural Basic Construction* (million yuan)

Year	Current Prices	Constant 1981 Prices**	Share of total government appropriations on basic construction (%)
1978	5114	5513	11.3
1979	6241	6570	12.1
1980	4839	5005	11.6
1981	2415	2415	7.3
1982	2881	2800	8.3
1983	3425	3184	8.9
1984	3363	2955	6.9
1985	3773	3042	6.5
1986	4387	3276	6.5
1987	4681	3224	7.5

* These data include grants and, after the 1985 reform converting direct grants to loans, funds issued to the Construction Bank as credit to be used for budgeted agricultural construction projects. They do not include extra-budgetary outlays on agricultural investment (for which data are not available). Note that these numbers differ from those cited by some other authors. Both Chinese and Western authors commonly cite data that measures the value of work completed calculated using budgeted (*yusuan*) prices, i.e., the prices used to draw up contruction plans. If actual prices diverge from budgeted prices, or if appropriated money is not spent in the year it was appropriated, then these two series will differ. From 1980-84, the data on appropriations are lower, and after 1984 higher, than the data for work completed at budgeted prices. The series on actual appropriations is, in my opinion, a better indicator of the government's willingness to devote money to agricultural investment.

** The constant price series is deflated using a construction price index as a deflator. This construction price index is derived from the nominal series on gross value of construction and the comparable price index of gross value of construction given in ZGTJZY 1990, p. 82. It is an index of budgeted, not actual, construction prices. An index of actual construction prices would be preferred, but no such index is available.

Sources:

Statistical Bureau Department of Fixed Asset Investment Statistics, *Zhongguo guding zichan touzi tongji ziliao, 1950-1985*, Beijing: Zhongguo Tongji Chubanshe, 1987, pp. 74-75.
ZGTJNJ 1988, pp. 663, 666.
ZGTJNJ 1990, p. 239.
ZGTJZY 1990, p. 82.

to agricultural investment, and, by raising farm incomes, also enlarge household savings which could be used for that investment. In addition, the government modified credit policies. Rural credit cooperatives, the major source of formal credit to farm households, were allowed to lend out a larger proportion of their deposits, and were in general granted more independence in their lending decisions. Informal cooperative and even private credit institutions were allowed to emerge so as to help match the supply and demand for funds.[47] Such measures were meant to increase the supply of investible funds.

Another approach to promoting agricultural investment was reflected in the policy of "using industry to support agriculture" (*yigong bunong*). Under this policy the central government urged local governments and rural enterprises to devote a share of their profits to agricultural subsidies and investment. These monies could be contributed directly by the enterprises, or could come out of local government tax revenues from industry.[48]

Although data on rural investment are incomplete, available statistics show that local and private investment in agriculture did not increase as anticipated (table 7). Profits of rural township and village enterprises used to aid agriculture declined in the early 1980s and then rose but did not recover fully. Nominal investment in agricultural fixed assets by rural collectives similarly declined in the early 1980s, and then recovered in 1987/88. These data suggest that, despite the campaign to "use industry to subsidize agriculture," the contribution of collective enterprises to agricultural investment in the late 1980s was not substantially greater than it had been in the early 1980s. Moreover, any nominal gains largely reflected higher prices rather than real growth. In constant price terms such investment appears to have declined.

Available data on private investment unfortunately are not broken down between agricultural and nonagricultural components.[49] Farm household purchases of fixed agricultural and nonagricultural productive assets rose substantially through 1983, levelled off at about 17 yuan per capita in 1983-85, and then rose rapidly again in 1987 and 1988. For reasons discussed below, it is likely that much of the growth in later years reflects purchases of nonagricultural assets. Once again, real growth was considerably lower: holding prices constant, household purchases of fixed assets show no real improvement after 1983.[50] Thus neither collective nor private investment in agriculture displays significant real growth, and neither kept pace with agricultural output.

In the late 1980s policy makers responded to slowing agricultural growth by raising direct state investment. In Autumn, 1988, the government called for an expansion in large-scale agricultural capital construction and water conservancy.[51] By 1989 the real level of government investment in agriculture had begun to rise, as had the share of agriculture in the total government budget for capital construction.[52] The 1990 national economic plan calls for an addi-

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[47] For a detailed discussion of credit policies and related developments, see On-Kit Tam, "Rural finance in China," *China Quarterly*, No. 113, pp. 60-76; Andrew Watson, "Investment issues in the Chinese countryside," *Australian Journal of Chinese Affairs* 22(1989), pp. 85-126; and Loraine West, "Rural credit markets and the cost of capital," mimeo, Stanford University, 1990.

[48] Sicular, "Ten years of reform. . .," pp. 6, 23.

[49] These numbers also exclude in-kind investment such as investment with unremunerated labor.

[50] Nominal purchases of productive assets is deflated using the price index for agricultural inputs.

[51] He Kang, "Seizing the opportunity for rich harvests," *Beijing Review* 33(3), January 15-21, 1990, p. 26.

[52] Data on budgetary appropriations are not available for 1989, but data on state investment in agricultural basic construction (completed work, valued at budgeted prices), show a 50 percent rise in 1989 over 1988 (it rose from less than 5 billion yuan in each of the years 1986, 1987,

Continued

Table 7. Statistics on Investment by Rural Collectives and Farm Households

Year	Profits of Township and Village Enterprises Used to Aid Agriculture (million yuan)[a]	Investment in Agricultural Fixed Assets by Rural Collectives (million yuan)[b]		Per capita purchases of productive fixed assets by farm households (yuan)[c]	
		Current Prices	Constant 1981 Prices	Current Prices	Constant 1981 Prices
1981	2270	3380	3380	2.61	2.61
1982		5205	5059	11.89	11.47
1983		3337	3102	18.44	17.56
1984		2899	2547	16.89	14.78
1985	880	2073	1672	18.70	15.61
1986				16.66	13.76
1987	850	4252	2929	20.52	15.83
1988	1160	4290	2597	25.14	16.89

a. Includes all aid to agriculture by these enterprises, both for investment and other purposes. From State Statistical Bureau Department of Rural Socioeconomic Statistics, *Zhongguo nongcun tongji nianjian, 1989*, Beijing: Zhongguo Tongji Chubanshe, p. 210.

b. Includes investment in both productive and nonproductive fixed assets. Statistical Bureau Department of Fixed Asset Investment Statistics, *op. cit.*, pp. 348-49, 351; ZGTJNJ 1988, p. 641; and ZGTJNJ 1989, p. 559. Deflated using the construction price index discussed in table 6 (see table 6 footnotes).

c. Investment in productive agricultural and nonagricultural fixed assets. *Zhongguo nongcun tongji nianjian, 1989*, pp. 296. Deflated using the price index for agricultural inputs from ZGTJNJ 1989, p. 693-94.

tional 30 percent increase in central government investment in agriculture, and for similar increases in local government invest-

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and 1988 to over 7 billion yuan in 1989). In real terms—deflated by the construction price index—the increase in 1989 was 36 percent. As a share of total government investment in basic construction, agriculture's share rose from 3 percent to 4.6 percent. See ZGTJNJ 1989, pp. 482, 487–488, 490; ZGTJZY 1990, p. 23; and table 6.

ment.[53] Statements by the central leadership indicate that this upward trend is likely to continue.[54]

V. NONAGRICULTURAL POLICIES THAT INFLUENCED AGRICULTURE

The agricultural slowdown in 1985 was not solely the result of reduced prices and incentives for farm products. A spate of concurrent changes in industrial, financial, and commercial policies expanded profitable opportunities outside of agriculture and lowered the relative attractiveness of farming. These policies continued to detract from agriculture through 1988. Only with the economic retrenchment in 1989–90 did agriculture begin to recover.

From agriculture's standpoint, one of the most important nonagricultural policies was the decision to relax restrictions on private rural business. Restrictions on private business had been eased gradually in the late seventies and early eighties, but in 1984 private business was for the first time officially condoned and encouraged. The rationale for this change of policy is explained in the 1984 No. 1 Document, which states that in the process of rural development more and more people must necessarily leave the land to enter into small industry and services. The new attitude was echoed in a speech by Wan Li in December, 1984:[55]

> [Some people's] conceptual understanding of rural enterprise (*xiangzen qiye*) is incomplete. They only consider the mass-run, collectively-owned enterprises of the original townships, villages, and teams to be rural enterprise, and they do not count the more recently established businesses that farmers run themselves or using pooled funds. Some people go so far as to look down on such businesses. This is incorrect. . . People should treat them equally and without discrimination, give them encouragement and support.

A variety of measures reflected this new attitude. In February, 1984, a State Council decision permitted individual businesses in rural areas to engage in urban-rural transport, set up stalls or stores in towns, and hire a few employees or apprentices.[56] In 1984/85 rural credit cooperatives, the primary credit institutions at the village level and a major source of agricultural credit for farm households, were explicitly allowed and, furthermore, mandated to provide credit for rural industrial and commercial businesses. Available statistics show the resulting diversion of credit from agricultural to nonagricultural borrowers. By 1985, of total loans by rural credit cooperatives, 45 percent went to township enterprises and household-run industry and services and only 36 percent went to agriculture. In 1986 the share of nonagricultural loans had risen further to 51 percent of the total, while the share going to agriculture had fallen to only 33 percent.[57] The diversion of funds from agriculture was further facilitated by policies on fund raising (*jizi*) outside of bank channels. At this time rural businesses were granted permission to raise funds by selling bonds and shares. Thus rural residents who did not themselves set up businesses were given a means of investing in industry rather than agriculture.[58]

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[53] Zou Jiahua, "Report on implementation of the 1989 Plan for National Economic and Social Development and the draft 1990 Plan (excerpts)," *Beijing Review* 33(17), April 23–29, 1990, p. V.

[54] See, for example, "Decision on further improving the economic environment, straightening out the economic order, and deepening the reforms (excerpts)," (Adopted at the fifth plenary session of the 13th Central Committee of the CCP on November 9, 1989), *Beijing Review 33(7), February 12–18, 1990, p. VI.*

[55] Xinhua Tongxunshe Guonei Ziliao Shi, *Shinian gaige dashiji, 1978–1987* Beijing: Xinhua Chubanshe, 1988, pp. 270–71.

[56] See Xinhua Tongxunshe Guonei Ziliao Shi, *op. cit.*, pp. 267–68.

[57] Chinese Finance and Banking Studies Association, *Zhongguo jinrong nianjian, 1987*, Beijing: Zhongguo Jinrong Chubanshe, 1988, p. III–130. Unfortunately, statistics are not available for 1983 and 1984.

Christine Wong describes how such measures, combined with a general wave of credit expansion in 1984–85, benefited both private and collective rural enterprises. In 1984 bank credit to township and village enterprises more than doubled to 47.5 billion yuan; in 1985 net borrowings by these enterprises increased by an additional 27.8 billion yuan.[59] Growth of private rural business was phenomenal, especially in 1985: their number rose from 4.2 million in 1983 to 4.4 million in 1984, and then more than doubled to 10.7 million in 1985. By 1985 employment in rural private businesses surpassed 28 million.[60] Total employment in rural enterprises, both private and collective, increased from about 30 million in 1983 to 70 million in 1985, and then to 95 million in 1988. Official statistics show that by 1988 rural enterprises employed almost one-quarter of the rural labor force.[61] These statistics reveal the rapid movement of both financial and human resources from agriculture into industry and services.

During these years other reforms in industrial and commercial policies also detracted from agriculture. In 1983 the central government began to permit the sale of manufactured products at market prices. Extra-plan marketing of important farm inputs began in 1983 when the State Council allowed the sale of imported fertilizers at higher prices. In mid-1984 supply and marketing coops and other local suppliers were permitted to purchase farm inputs independently and to sell the inputs at prices that reflected their purchase and handling costs. Fertilizers, pesticides, and fuel were now increasingly sold at market prices. Since market prices were higher than state list prices, the liberalization of commercial policies raised the cost to farmers of additional farm inputs.[62] One author writes that by 1985 chemical fertilizer prices were 43 percent, pesticide prices 83 percent, and farm machinery prices 92 percent higher than in 1983, and that the prices of diesel fuel, electricity and water had all doubled.[63]

Although it began later, inflation further contributed to the deterioration in agriculture's status. Fiscal and monetary actions caused large budgetary deficits, rapid growth in the money supply, and unprecedented inflation in 1987–88. The inflation had several disadvantages for agriculture. First, as mentioned above, inflation outpaced increases in state contract procurement prices. As the differential between market and state prices for farm products grew, farmers became increasingly unwilling to sign or fulfill delivery contracts to the state.[64] Local governments, which were responsible for ensuring contract fulfillment, responded by restricting free market trade of major farm products. Not surprisingly, such behavior only increased the relative attractiveness of the many off-farm activities not subject to price and market interventions. Second, inflation exacerbated increases in the costs of farm inputs. By 1986/87 market prices for urea were 20 percent to 50 percent higher, and by 1988/89 more than double, state list prices.[65] Thus inflation prolonged the outflow of resources from agriculture.

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[58] See Christine Wong, "Interpreting rural industrial growth in the post-Mao period," Modern China 14(1), January 1988, pp. 11–12.

[59] Wong, *op. cit.*, p. 11.

[60] Wong, *op. cit.*, p. 12.

[61] Wong, *op. cit.*, p. 4, and ZGTJZY 1990, p. 65.

[62] Terry Sicular, "Ten years of reform. . .," pp. 19–20.

[63] Duan Yingbi, "Liangshi liutong tizhi bixu da gaige," NYJJWT 11(1986), p. 37.

[64] Institute of Development General Topics Group, *op. cit.*, pp. 8–9; Liu Wenbao and Zheng Xinwu, *op. cit.*, NYJJWT 11 (1986), p. 60.

The austerity program that began in late 1988 reversed some of the policies discussed above. In order to stem inflation, the government severely restricted credit. Inflation slowed, and market prices began to level off. This permitted increases in contract prices to reduce, although not eliminate, the gap between planned and market prices.

One aim of the economic retrenchment was to slow growth in rural industry. Rural enterprises were denied new credit and expected to raise funds internally. Supplies of raw materials and energy were tightened. The government hoped that a large number of township enterprises would either go bankrupt, become accessories to state-run urban firms, or shift to production based on local resources. Private business was a particular target: the government announced in August, 1989, a nationwide campaign to inspect private firms for tax evasion and illegal activities and called for the closing of a large number of private businesses. The effects of these measures was perceptible. In 1989 more than 3 million rural companies (collective and private) were either shut down or shifted to other lines of business, and 8 million employees had to return to farming.[66] These measures improved agriculture's relative standing: rural industry's loss was agriculture's gain.

VI. Conclusion

During the 1980s China's leaders demonstrated an unprecedented willingness to relinquish direct control over agriculture. Central policies abolished mandatory production planning and reduced the scope of mandatory procurement quotas. Price and incentive measures became important policy tools. Restrictions on private trade were relaxed, and markets were permitted to play a larger role in resourceand allocation. These initiatives contributed to a period of dynamic growth in the early 1980s.

Agriculture's fortunes reversed in the mid-1980s. Planned prices and incentives for farm products were reduced, and market prices began to fall. Commercial reforms permitted extra-plan sale of farm inputs at high, and rising prices. The government condoned the establishment of private rural businesses, and adopted credit policies that diverted funds from farming to nonagricultural activities. Together, these measures caused resources to flow out from agriculture. Growth in farm, and especially crop, production slowed dramatically.

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[65] See table 7 in Sicular, "Ten years of reform. . ."

[66] "Rural firms to face period of austerity," *Beijing Review* 33(4), January 22-28, 1990, pp. 39-40; "Beijing launches probe of private firms' taxes," *Asian Wall Street Journal Weekly*, 7 August 1989, p. 3; David E. Sanger, "Crackdown on China businesses," *New York Times*, 29 August 1989, p. D1.

Steps taken in the ensuing years did little to bolster agricultural performance. Both the central and local governments increased controls over cultivation and restricted market trade in major farm products. Policies raising planned prices and material incentives were not implemented fully. Inflation increased the relative attractiveness of activities subject to fewer restrictions and of products that could be sold at market prices. Only with the austerity program in 1989 and 1990 did agriculture's relative standing begin to improve.

Thus agriculture's slowdown in 1985 and stagnation in ensuing years can be explained largely as the result of policy measures enacted during those years. Other explanations for the slowdown have also been proposed—that the slowdown was inevitable as the one-time gains from decollectivization were exhausted, that arable land area was declining and uneconomically distributed, that uncertain land rights discouraged necessary farm investment, and so on. Such factors may have contributed to the slowdown, but several considerations suggest that they were only secondary causes. First, none of these factors explains why agricultural performance declined so abruptly in 1985. Second, evidence from studies of other countries does not support the conclusion that small farms are inefficient. Third, rural residents were apparently willing to invest heavily in private nonagricultural businesses despite the fact that such activities had equally uncertain prospects and little legal protection.

If the slowdown was largely the result of changes in policy, what implications can be drawn for farm policy in the 1990s? Some might conclude that the way to promote agriculture is to discourage or restrict the development of competing nonagricultural activities in rural areas. This conclusion is incorrect. Economists have long recognized that the development of nonagricultural sectors, and the flow of resources from agriculture to those sectors, is a key part of the development process. Yet resources must be allowed to flow in both directions: the expanding nonagricultural demand for labor and raw materials should bring about rising farm prices and incomes. Higher prices for agricultural products and the growth in rural demand resulting from rising incomes then draws resources back to agriculture.

Unfortunately, in China government policies, especially the planned procurement and distribution of farm products, place agriculture at a disadvantage. In order to maintain planned procurement, the government prevents farmers from switching to the production of the most profitable crops and from selling their products to the highest bidder. When market prices for farm products begin to rise, a necessary precondition for the reversal of the resource outflow, price ceilings are imposed and market trade blocked. Such actions discourage farm production and cause imbalance in the development process.

Macroeconomic policy has contributed to agriculture's unequal standing. During the 1980s the Chinese government has experienced persistent budgetary deficits, and price subsidies on farm products have contributed to those deficits. Due to the link between pricing and the state budget, budgetary concerns have greatly influenced agricultural price and incentive policies. Growth in price subsidies could be stemmed if the government were willing to raise planned sales prices in step with procurement prices. A combination of budgetary pressures and urban bias thus place agriculture at a disadvantage. Budgetary considerations have also contributed to local government interference with central measures. Local governments bear part of the financial burden of price and incentive programs, and this reduces their willingness to carry out such programs. So long as prices and incentives are closely linked with government finances, budgetary considerations rather than the aim of promoting efficient agricultural growth will continue to interfere with the making of farm policy.

The effects of nonagricultural concerns on agriculture highlights the close connection between agriculture and other sectors of the economy. Nonagricultural development both competes with and complements agricultural growth. Nonagricultural policies can reinforce or detract from agricultural programmes. Effective agricultural policy in the 1990s will thus require a broad view, attention to policy coordination, and a true willingness to give agriculture equal footing.

CHINA'S AGRICULTURAL REFORMS: EVALUATION AND OUTLOOK

By Shwu-Eng H. Webb and Francis C. Tuan *

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I. INTRODUCTION

China's 1979 rural reforms brought rapid growth of agricultural production and trade, particularly for the first half of the 1980s. Reforms included policy changes in farming institutions, prices, procurement, marketing, and the trade system. However, agricultural growth slowed after 1985 and grain production, a key component of China's agricultural sector, stagnated. Rural reforms stumbled during the second half of the 1980s, because the state hesitated to make reforms in urban food policy necessary to complete the move towards an open market for agricultural commodities. The state also hesitated to place hard budget constraints on state-owned enterprises. The mounting financial burdens contributed to spiraling inflation in late 1980s, and stagnation of grain production caused the state to adopt austerity measures, and reimpose central control on grain production and trade. Economic reforms were placed on the hold.

The outlook for the 1990s depends on how China's policy makers view the results of their latest retrenchment policies. In the short-term, the recent policy changes have generated some of the desired results including higher grain production and lower inflation. But over the longer run, the disincentives and inefficiency created by these measures will weigh heavily on the economy. Now that grain production has increased and inflation has been brought under control, Chinese leaders may perceive a new opportunity for further economic reform. If so, further production of various agricultural commodities will be increasingly driven on economic forces and trade will increase. However, there is possibility that leaders will view the success of re-centralization policies as a vindication of cen-

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tral planning and continue to emphasize grain, oilseeds, and cotton self-sufficiency while minimizing grain imports. To project China's economic outlook in the 1990s, one must ask the crucial question: Where does the reform movement stand now?

II. 1980s: The Reform Decade

Rural economic reforms since 1979 can be divided into three periods. The first period, from 1979 to 1984, focused on the restructuring of the rural economy through institutional changes to increase agricultural production. These changes, introduced in the early part of the 1980s, had a profoundly positive impact on economic growth. China's total agricultural production, excluding village enterprises, grew by about 7.5 percent per year between 1978 and 1984. The second period, from 1985 to late 1988, concentrated on extending the restructuring reforms by increasing the role of markets and prices. This period was generally characterized by slower growth. Total agricultural production grew at slightly less than 4 percent annually. The last period, from late 1988 to the present, marks the beginning of a retrenchment period, in which austerity measures were adopted to combat spiraling inflation and central control was reimposed over the economy. These measures included a decision by the government in 1989 to reemphasize administrative mechanisms for increasing grain production.

REFORM POLICIES

Four sets of major policy changes were responsible for the successes of the economic reforms in rural areas. First, the introduction of the Household Production Responsibility System (HPRS, which later developed into the household contract system) in the early 1980s gave peasants incentives to improve agricultural productivity, thus contributing to rapid economic growth in rural areas. Second, there was a substantial rise in procurement prices, which significantly increased rural incomes. Third, the opening up of labor and commodity markets facilitated the transfer of resources within and out of the agricultural sector and accelerated agricultural specialization and rural industrialization. Finally, an increase in local autonomy allowed township and village enterprises to develop rapidly, using local capital and labor resources released from increasing productivity in the agricultural sector.

OVERALL ACHIEVEMENT

These policy changes introduced in the early part of the 1980s had a significant impact on economic growth in China. Growth, by any measure, was much higher during the 1979 to 1988 period than the period from 1952 to 1978 (table 1). National income, per capita income, and gross value of output (in current value) took only 10 years in the 1979–88 period to triple the growth achieved in the 26 years from 1952 to 1978. If the retail price index is used as a deflator, per capita income in real terms in 1988 was about 5 times that of 1952, and about twice that of 1978.

Liberalization of agricultural production systems brought a faster increase in agricultural productivity than in industrial productivity. Gross value of output per worker in the agricultural

Table 1. Trends in the major economic indicators in China, 1952-78 VS. 1978-88

Item	Unit	1952	1978	1988	Annual growth 1952-78	 1978-88
					Percent	
Population	Million	574.8	962.6	1096.1	2.0	1.3
Labor force	Million	207.3	401.5	543.3	2.6	3.1
National income	Billion yuan	58.9	301.0	1177.0	6.5	14.6
Gross Value Output	Billion yuan	101.5	684.6	2984.7	7.6	15.9
industrial GVO	Billion yuan	34.9	423.7	1822.4	10.1	15.7
agricultural GVO	Billion yuan	46.1	139.7	586.5	4.4	15.4
Per capita income	Yuan/year	102.5	312.7	1073.8	4.4	13.1
Agricultural output						
food grain	Million tons	163.9	304.8	394.1	2.4	2.6
oilseeds	Million tons	4.2	5.2	13.2	0.8	9.7
meat	Million tons	3.4	8.6	21.9	3.6	9.9
aquatic	Million tons	1.7	4.7	10.6	4.0	8.6
Per capita production						
food grain	Kilogram	285.2	316.6	359.5	0.4	1.3
oilseeds	Kilogram	7.3	5.4	12.0	-1.1	8.3
meat	Kilogram	5.9	8.9	20.0	1.6	8.4
aquatic	Kilogram	2.9	4.8	9.7	2.0	7.2
Price indices						
Procurement price	Percent	100.0	178.8	437.4	2.3	9.4
Resale price	Percent	100.0	121.6	210.0	0.8	5.6
Living expenditure	Percent	100.0	125.3	236.3	0.9	6.5

Source: (7,1989, pp.17-19)

sector increased from 475 yuan per year in 1978 to 1,815 yuan in 1988, an annual growth rate of 14.4 percent. Gross output value per worker in the industrial sector increased from 8,459 yuan in 1979 to 18,864 yuan in 1988, or an annual increase of 8.35 percent.

Prior to the 1979 rural economic reforms, the growth rates for the production of major agricultural commodities were either less than or barely exceeded population growth between 1952 and 1978. Per capita production of oilseeds fell at a rate of 1.1 percent per year. Per capita food grain production expanded at a rate of only 0.4 percent and meat products 2 percent. Since the 1979 reforms, per capita grain production increased from 317 kilograms (kg) in 1978 to 360 kg in 1988, reaching a peak of 395 kg in 1984, a growth rate of 1.3 percent per year. This growth was achieved despite an annual population growth rate of 1.3 percent, a decrease of grain sown area by 3.4 percent, and a decline in labor force devoted to crop production. The per capita production of oilseed and meat products, which earned higher relative returns than grain crops, increased at a rate of over 7 percent a year (table 1).

With increasing autonomy under the HPRS, peasants have been guided by economic returns in their decisions as to what and how much of a commodity to produce, subject to meeting the state contract requirements and other institutional constraints. With agricultural production becoming more efficient, economic reforms encouraging the development of household and township enterprises, economic structures in rural areas became more diversified (table 2). For example, in 1978, 90 percent of the rural labor force was engaged in primary industry such as farming and mining, and accounted for about 70 percent of the value of products produced in rural society. The proportion of rural laborers employed in the nonprimary industrial sector doubled from 1978 to 1988 and accounted for 47 percent of gross value product in rural society.

Tables 2. Changes in economic structure in China between 1978 and 1988

	1978		1988		Annual growth (1978-88)
	GVO billion yuan	Percent of the total	GVO billion yuan	Percent of the total	Percent
Gross value output	684.6	100.0	2984.7	100.0	15.86
industry	423.7	61.9	1822.4	61.1	15.71
argiculture	139.7	20.4	586.5	19.7	15.43
others	121.2	17.7	575.8	19.2	16.86
	Total number million	Percent of the total	Total number million	Percent of the total	
Labor force	405.81	100.0	543.336	100.0	2.96
industry	50.09	12.3	96.608	17.8	6.79
argiculture	294.26	72.5	323.083	59.5	0.94
others	61.46	15.2	123.645	22.8	7.24
	GVO per capita yuan	Percent of the average	GVO per labor force yuan	Percent of the average	
GVO per labor force	1687.0	100.0	5493.3	100.0	12.53
industry	8458.8	501.4	18863.9	343.4	8.35
argiculture	474.8	28.1	1815.2	33.0	14.35
others	1972.0	116.9	4656.8	84.8	8.97

Source:(7, 1989, p.44 & p.102)

Peasants were given more freedom to select types of production activities. The state also began to permit land use rights to be transferrable and extended land leases to 3-5 years. In some areas, land lease contracts are granted for 15 or even 50 years. With the reestablishment of labor and commodity markets in rural areas, peasants can specialize in crop production and purchase grain from the open markets to fulfil obligatory state procurement. As a result, more households have specialized in crops and livestock production and increased their scale of operations to specialize in single crop production instead of a mix of grain crops for self-sufficiency.

AGRICULTURAL DEVELOPMENTS

The changes in incentive structure stimulated agricultural productivity. Gross value of agricultural output (GVAO)[1] in current price increased from 170 billion yuan in 1979 to 587 billion yuan in 1988, growing at an annual rate of 15 percent. In China, the agricultural sector includes five subsectors —crop, animal husbandry, sideline products (handicraft etc.), forestry, and fisheries. Aquatic production has been the fastest growing subsector with an annual growth rate of 32 percent (table 3). Because growth in fisheries, sideline products, and animal husbandry was so much faster than in the traditionally dominant crop subsector, the composition of the agricultural sectors has changed dramatically in the past decade. The share of the crop sector fell from about 75 percent of GVAO in 1979 to 56 percent in 1988. The share of animal husbandry increased from 17 percent in 1979 to 27 percent in 1988. Sideline products increased from 3.4 percent in 1979 to 6.7 percent in 1988. Fisheries grew from only 1.5 percent of GVAO in 1979 to 5.5 percent in 1988, overtaking the forestry sector. Forestry fell from the third largest subsector (3.6 percent) in 1979 to the smallest sector in 1988 (4.7 percent).

Table 3. Trends in agricultural output value in China, by branch, 1979 - 1988

Year	Agriculture	Crop	Forestry	Animal husbandry	Sideline products	Fishing
Agricultural product value based on current value (billion yuan)						
1979:	169.76	126.73	6.07	28.56	5.80	2.60
1988:	586.53	327.69	27.53	159.76	39.31	32.25
Annual growth between 1979 - 1988 (percent):	14.8	- 11.1	18.3	21.1	23.7	32.3
Percent of the total						
1979:	100.0	74.7	3.6	16.8	3.4	1.5
1988:	100.0	55.9	4.7	27.2	6.7	5.5
Changes between 1979 and 1988:	345.51	-18.78	1.12	10.41	3.28	3.97

Source: (7, p.166)

As the agricultural sector became more diversified, resources were shifted out of the crop sector. Total crop sown area declined from 148.5 million hectares in 1979 to 144.9 million hectares in 1988, a 2.4 percent decline (table 4). Although grain procurement prices have increased substantially over the last 10 years, the returns on grain crops still fall far behind cash crops. For example, using 1987 domestic procurement prices to calculate net returns, the profit per hectare on cotton was about twice that of grain crops.

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[1] The GVAO comparison between 1979 and 1988 is based on current prices. The accuracy of the price data used to calculate GVAO vary from one subsector to the other. There are national reporting system of physical outputs and official prices in the crop subsector. Price data for crop subsector are the most accurate among all subsectors. For subsidiary subsectors with high proportions of products traded in the open markets, data are least accurate. Many other problems in using GVAO data are pointed out in Robert Field's article, *Trends in the Value of Agricultural Output*. (*2*)

Table 4. Trends in crop sown area in China, 1979 - 1988

Year	Food grain	Economic crops	Other crop	Multiple cropping index	Total sown area	Cultivated area
			Percent			
1979:					(1,000 hectares)	
	80.3	9.9	9.7	149.0	148477.0	99649.0
1988:						
	76.0	14.8	9.1	153.3	144868.9	95749.5
Changes between 1979 and 1988:						
	-7.7	45.6	-8.3	1.5	-2.4	-3.9

Source:(7, p.192)

As a result, in 1988, area sown to grain crops fell by 7.7 percent from 1979. The proportion of sown area devoted to grain production decreased from 80.3 percent of total crops in 1979 to 76.0 percent in 1988. Other crops, including green manures, forage, and vegetables, also suffered a decline of about 8 percent. The sown area devoted to economic crops, such as oilseeds, increased substantially, from 14.7 million hectares in 1979 to 21.4 in 1988, an increase of 45.6 percent. The proportion of sown area devoted to economic crops increased from 9.9 percent to 14.8 percent during the same period.

The area sown to rice and corn declined at an annual rate of 0.6 percent and 0.2 percent, respectively, over the period of 1979 to 1988 (table 5). Soybean (considered a grain crop in China) is the only grain crop that expanded sown area in the last 10 years, from 7.3 million hectares in 1979 to 8.1 in 1988, an annual increase of 1.3 percent. Peanut and cotton sown area also increased at annual rates of 4.1 and 2.3 percent respectively over the last decade.

The rural economic reforms had a significant effect on commodity productivity. Despite decreases in grain sown area, output of rice, wheat, and corn expanded at annual rates of 2, 4, and 3 percent respectively (table 5). The production of soybeans, cotton, and peanuts grew at an annual rate of 5, 7, and 8 percent, respectively. In the last decade, the annual growth rate in productivity tended to correspond with the changes in the sown area. Crops such as cotton, peanuts, and soybeans, which had higher growth rates in sown areas, also had higher productivity growth.

Table 5. Trends in sown area, production and productivity in China, by crop, 1979 - 1988

Year	Rice	Wheat	Corn	Soybeans	Cotton	Peanuts
				Sown area: 1,000 hectares		
1979:	33873	29357	21033	7247	4512	2075.0
1988:	31987	28785	19692	8120	5535	2977
Annual growth rate between 1979 and 1988 (Percent):	-0.6	-0.2	-0.2	1.3	2.3	4.1
				Production: 1,000 tons		
1979:	143750	62730	60035	7460	2207	2822
1988:	169107	85432	77351	11645	4149	5693
Annual growth rate between 1979 and 1988 (Percent):	1.8	3.5	2.9	5.1	7.3	8.1
				Productivity: tons/hectare		
1979:	4.244	2.137	2.982	1.029	0.489	1.360
1988:	5.287	2.968	3.928	1.434	0.750	1.913
Annual growth rate between 1979 and 1988 (Percent):	2.5	3.7	3.1	3.8	4.9	3.9

Source: (4)

AGRICULTURAL TRADE EXPANDED

China's overall exports and imports expanded rapidly, an almost 13-percent annual growth between 1981 and 1988, except for 1982. In general, China's agricultural trade also grew, but at a slower rate of 11.7 percent per year since 1983. Agricultural trade has contributed only about 14 to 15 percent of China's total trade value in recent years, compared with over 20 percent in the early 1980s (table 6). However, with the exception of 1982, agricultural trade was in surplus, in contrast to deficits for overall trade since 1984. The agricultural trade surplus decreased towards the end of 1980s but remained around $3 billion in 1989.

The agricultural trade surplus grew sharply in the mid-1980s as China decided to export more and import fewer agricultural commodities when commodity production peaked in 1984 and infrastructure was not adequate to handle interregional transfers and storage. The country started shipping corn, oilseeds, including soybeans, and cotton to many Pacific Rim countries, such as Japan, South Korea, and Hong Kong. The expansion of commodity exports has slowed in the last couple of years as crop production stagnated

Table 6 -- China's agricultural trade

Year	Total trade	Annual growth	Agricultural trade							
			Total	Annual growth	Ag trade over total	Exports	Ag Exports over total	Imports	Ag Imports over total
	Bil US$	Percent	Bil US$	Percent	Percent	Bil US$	Percent	Bil US$	Percent
1981	44.02	NA	NA	NA	NA	NA	NA	NA	NA
1982	41.61	-5.5	8.84	NA	21.3	4.00	17.9	4.84	25.1
1983	43.62	4.8	8.46	-4.3	19.4	4.55	20.5	3.90	18.3
1984	53.55	22.8	7.99	-5.6	14.9	5.23	20.0	2.75	10.0
1985	69.60	30.0	8.73	9.3	12.5	6.28	23.0	2.44	5.8
1986	73.85	6.1	9.85	12.9	13.3	7.12	23.0	2.74	6.4
1987	82.65	11.9	11.92	20.9	14.4	8.03	20.4	3.89	9.0
1988	102.79	24.4	15.28	28.3	14.9	9.46	19.9	5.83	10.5
1989	111.63	8.6	16.41	7.3	14.7	9.70	18.5	6.71	11.3

Source:(14, p.45)

and domestic demand for feedgrain, soybean meals, and cotton grew.

On the import side, China sharply reduced all imports of agricultural commodities after 1984. For example, corn and cotton imports were largely eliminated for a number of years, and wheat purchases were reduced to only about 6 million tons in 1985 and 1986, from a previous high of almost 14 million tons. China also began to sell cotton in 1985 and became a major cotton exporter after being a major importer at the beginning of the 1980s. The situation of imports, similar to the exporting side, also changed in the last 2 or 3 years because of stagnating agricultural production. In general, imports of corn, oilseeds, and cotton have resumed, with cotton imports picking up significantly in 1989. Because of severe shortages, China also sharply increased raw sugar and agricultural chemical imports, including fertilizer, in the last two or three years.

IMPROVEMENT IN LIVING STANDARDS

The economic reforms have been successful in improving the living standards of China's people. Per capita income increased from 316 yuan in 1978 to 1,182 yuan in 1988 in urban areas (a nominal rate of 14 percent per year), and from 134 yuan to 545 yuan in rural areas (an annual rate of 15 percent). Consumption expenditure increased from 311 yuan in 1978 to 1,104 in 1988 for urban residents, while in rural areas it increased from 116 yuan to 477 over the same period of time. Consumers are spending a declining share of their budget on food: for urban areas it decreased from 58 percent to 51 percent from 1978 to 1988, and declined for rural areas from 68 percent to 53 percent. Living standards improved substantially as real income increases and a larger proportion of income is available to spend on non-staple food items.

Nonetheless, China's per capita consumption of agricultural commodities has increased markedly in the 1980s. For instance, per capita grain for human consumption was 198 kilograms in 1958 and 196 kilograms in 1979, but rose to 254 in 1985 and remained at around 250 in the last two or three years, although grain supplies have been much tighter in that period. Grains consumed by the livestock sector have also increased continuously in the last decade. Per capita meat and vegetable oil consumption increased from 8.1 and 1.6 kilograms in 1978 to 16.7 and 5.9 kilograms in 1988, respectively.

Per capita consumption of livestock products is still low compared with world averages, despite impressive increases in the 1980s. This is also true for vegetable oil, cotton, and sugar consumption. The per capita consumption of agricultural commodities, especially meat, will continue to grow, and therefore domestic demand for feed grains should expand despite slower growth of per capita income in the 1990s. Consequently, long-term exports of feed grain, particularly corn, will gradually shrink during the next 10 years.

III. Emerging Problems in the later 1980s

Rapid economic growth and increases in agricultural productivity slowed down after 1984 and many problems started to emerge. Failure to move reforms beyond agricultural production became a major stumbling block for sustained economic growth. The unwillingness of current leaders to reform the political system contributed to the slow development of designing legal supports, including an acceptable legalized property rights structure. Heavy subsidies for urban residents resulted from the irrational pricing system, and inefficient state-owned enterprises in the urban areas continue to be a major drag on the economy.

LACK OF LEGAL, INSTITUTIONAL, AND ADMINISTRATIVE EXPERIENCE

One of the most important problems in implementing the household contract system has been the lack of a legal system which guarantees contract fulfillment. The court system has not been well developed. There are few judges trained to hear contract dispute cases and fewer lawyers to represent farmers. Local tradition encourages negotiated settlements and courts are used only as the last resort. The rule of a village leader rather than law continues to be the modus operandi in rural areas.

Legal system reforms are key to allowing individual profit-maximizing goals can be orderly pursued within contractual arrangements. Only when personal profits earned from hard work can be guaranteed through legal systems will individuals have the incentive to continue to work hard. Proper tax laws could be designed to channel a portion of these profits to state coffers for supporting investment in infrastructure instead of lining corrupt officials' pockets.

Lack of a legal system to protect property rights creates very little incentive to increase investment or to improve productivity in the long-run. Because of the uncertain future, farmers often use their profits to purchase consumer goods, such as TV sets, or to build houses to improve living standards. Since peasants cannot own their land and land-use rights are uncertain, they farm contracted farmland only to maximize short-run profits and make very little investment to improve land productivity for the future.

LAND TENURE SYSTEM

Under the household responsibility system, the collective land in general was contracted out to each of the households in proportion to their labor size for one to three years.[2] The short-term lease provides very little incentive to invest in improving land productivity in the long-term. Reform policies were introduced to correct these problems: households were allowed to exchange or hire limited laborer services and extend the lease to 15 years in some areas. However, the lack of a legal system prevents the effective implementation of these policies. In many areas, the contract land is still subject to each year negotiation as well as local cadre approval.

In addition, farmland has been divided into many small parcels since the introduction of the household production responsibility system. When the system was established in the early 1980s, all big tracts were divided into several different grades, and households were then allocated a parcel from each grade. On the average, each household's holding of 1.2 acres were fragmented into nine tracts. This type of land tenure system undoubtedly inhibits efficient use of farmland.

LACK OF MARKET DEVELOPMENT

In China, the government interferes in agricultural commodity marketing through the enormous state commercial network of collective supply and marketing cooperatives under its direct control. Peasants in China are unable to predict how the government will interfere in agricultural production in relation to input supplies and procurement decisions. The state often uses input delivery policies to manipulate agricultural commodity production and procurement, supplies of chemical inputs, for example, are still tightly controlled. Peasants take great risks in deciding what to produce and a wrong decision can result in a large loss of potential income.

Many economists thought that China missed a golden opportunity for a full-scale introduction of a market-oriented economy in 1984. The production of most agricultural commodities were plentiful in that year and rural marketing systems would likely have been able to perform as well as the state system in distributing agricultural products. Instead, the government adopted a double-track pricing system for most agricultural goods, raw materials, and almost all major industrial outputs. Urban residents and state-owned enterprises often paid for raw materials with low state-fixed prices. The markets that could have raised prices to reflect actual demand and production costs were therefore very limited.

The double-track pricing system does not allocate resources efficiently. Producers often try to secure low fixed prices regardless of whether higher market prices exist. Farmers have little incentive to produce those commodities. Because the government heavily subsidizes consumption of most agricultural commodities, and because of limited transportation facilities, the state maintains a quasi-monopsony over the purchase of most agricultural commodities. Agricultural commodity prices are distorted by government policies and the prices do not signal consumer demand and producer supply behavior.

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[2] In some places with both higher population pressure and land productivity, Village land is divided into food plots and duty plots. Food plots are free, distributed on a per capita basis, and intended to provide for a family's own consumption. The remaining land is then divided into duty plots, allocated contractually to laborers and subject to tax in the form of quota delivery.

While the government's failure to reform the legal systems encourages corruption and erodes individual incentive to work hard, the price differentials created under the double-track pricing system provide incentive for enterprises to be intermediate links between corrupt officials and the next buyers. Commodities change hands several times and prices rise each time without any value being added. Profits earned by an enterprise very often depend on its capability to buy at a lower price and then sell at a higher price, and not on the adoption of improved technology or enhanced labor productivity.

Even many individuals and state-run enterprises guaranteed to receive low-priced inputs must bribe officials. The costs of operating enterprises have increased. Shrinking profits have reduced the enthusiasm of private enterprises and the government budget is stretched as state-run enterprises pass on these increasing costs.

The lack of infrastructure development prevents markets from developing and causes rural consumption of agricultural commodities to be very distorted. Rice in the south and wheat in the north are used to feed livestock because corn can not be transferred to where it is needed. Market prices of major agricultural commodities in many rich urban areas are often three or four times the market prices peasants receive. In some regions, surpluses of agricultural products have piled up while other regions have suffered shortages because of inefficient marketing.

URBAN SUBSIDIES

China has a policy of low wages for government employees including industrial workers in large cities, to support heavy industry development. Heavy industry development had been the top priority for the period from the 1950s through the 1970s. In return, the government provides cheap food, housing, utilities and public services to urban residents. The Communist Party has evolved as essentially an urban-based proletarian party. It was difficult for the Party to reform marketing structures when those reforms meant that urban food prices would rise, lowering the standard of living for its urban constituents.

Rather than broaden the reform process to urban areas, China implemented a double-track pricing system which gave the appearance of reform in the distribution system. It did allow for state-fixed prices and market negotiated prices to coexist for major agricultural products and intermediate materials. But it avoided dismantling the urban food subsidy system and created tremendous opportunities for corruption. The subsidized consumption of some major agricultural commodities in urban areas is perhaps the largest policy distortion of China's food and agricultural sector. The amount guaranteed by ration coupons was set in 1955 when grain and edible oils accounted for a large portion of the consumer diet. Economic reforms brought substantial increases in per capita incomes. Consumers were willing and able to diversify their diets.

With prices of food grains and edible oils at artificially low levels, there was no incentive for users to conserve. As grain and edible oils are sold at both fixed and negotiated prices, coupons for these products have actually become a currency which can be traded in open markets for almost everything despite prohibitions against coupon transfers or sales. The government is committed to sell the rationed amount. Over the last decade, the government raised procurement prices many times without raising the retail prices for ration coupon sales. Government subsidies for urban consumption have thus increased dramatically. Subsidies for grain and edible oils alone have increased from around 6 billion yuan in 1979 to over 30 billion yuan in 1989.

IV. Estimates of Government Intervention

Although the 1979 economic reforms have brought increasing liberalization to the agricultural sector, the government still intervenes heavily. For example, by 1986, the government had increased six-fold the portion of food grain procurement at negotiated prices, but this accounted for only about one third of total procurement.

PSE/CSE ESTIMATION

The producer subsidy equivalent (PSE) and consumer subsidy equivalent (CSE) measures are used in this study to evaluate the degree of policy intervention among major agricultural commodities in China. The PSE/CSE measures are estimates of the amount of the cash subsidy or tax needed to compensate farmers/consumers for removing government intervention. Estimates of PSE/CSE for 1986 presented here do not account for government investments in infrastructure such as irrigation, transportation, or any services that contributed value-added to commodities. However, in this report it is assumed that government services were proportionately applied across all agricultural commodities. The PSEs/CSEs, when compared across agricultural commodities, show the degree of intervention among different agricultural commodities.

GOVERNMENT INTERVENTION IN AGRICULTURAL PRODUCTION

The government procured about one-third of grain output and three-quarters of peanut and pork output. Almost all cotton is procured by the state. Therefore, it is extremely difficult to estimate a domestic market price. No attempt is made in this article to estimate PSE due to procurement for cotton. Because of the difficulty of getting market information on pork, this study also did not estimate PSE due to procurement for pork.

The world reference price for a specific commodity was based on the total value of the imported commodity divided by the total quantity imported into Hong Kong. If Hong Kong prices were not available, then, prices based on imports to Asia were used. In this article, official exchange rates were used to convert world reference prices into domestic-valued prices. The shadow exchange rates were often much greater than the official rates, suggesting the yuan was overvalued. For example, during the period 1986–88, the official exchange rate was $1/ 3.72 RMB, but in the open market the rate was $1 for about 7 RMB. The yuan has been devalued continuously since reforms began, except in 1980, and the current rate is 4.72 (since December 1989) (table 7).

Table 7. Official exchange rate of US$ to renminbi (RMB): 1978-88

1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Unit: RMB per US$											
1.67	1.55	1.50	1.70	1.89	1.98	2.32	2.94	3.45	3.72	3.72	4.72

Source: (18)

Two components of PSEs are estimated in this report: 1) the effects due to domestic procurement policy measures calculated as the sum of the input subsidies and the difference between the procurement and market prices, and 2) effects due to border measures, calculated as the difference between prices domestic producers are getting and alternative prices that they could have received if there were no government measures to restrain trade.

A negative (positive) PSE indicates a tax (support) on the producers of that commodity. Negative PSEs due to procurement policy indicate that procurement prices are less than market prices and the price difference more than offsets the estimated input subsidies. For each unit of grain procured, taxes from procurement policy ranged from 5 percent of market prices for soybeans to 12 percent for rice (table 8). For peanuts, the main source of edible oil in China, but also is a major export, the government tax through procurement policy is about 14 percent. The effect of the procurement policy is negative for all major agricultural commodities except cotton. China's cotton is of better quality than that traded in the international markets. The calculation of PSE for cotton in this study does not account for this quality difference.

The border measure component of PSEs varies widely across commodities. The government tends to use border measures to maintain the price competitiveness of major exports such as peanuts and rice (table 8). Among the grain products rice has the biggest difference between the domestic market price and world price. Domestic prices for wheat, corn and soybeans are about the same as their respective world prices. That food security is still a top priority is reflected in the price ratio of wheat and rice—the reverse of the world price ratio. To encourage wheat production, the government set the price of wheat higher than the price of rice. China's rice farmers are taxed much more heavily than wheat producers.

GOVERNMENT INTERVENTION IN CONSUMPTION OF AGRICULTURAL COMMODITIES

Estimates for CSEs also contain two parts: 1) budget expenditures as urban rationing policy in making up the price difference between government procurement prices and subsidized resale prices, and 2) border measures reflecting the difference between what domestic consumers are paying and what they would likely pay if there were no measures to restrain trade.

Table 8. Estimates of China's Producer Subsidy Equivalent, 1986

Crop	Production	Quantity Procured	Domestic Market Price	Reference Price Price	Value of Subsidies	Policy transfers Border	PSE Percent
Units	Mil. metric tons	Mil.metric tons	Yuan/Ton	Yuan/Ton	Mil. Yuans	Mil. Yuans	%
Rice	129.2	40.7	562.3	680.2	-2712.8	-15230.8	-24.7
Wheat	90.0	34.6	496.6	522.7	-1173.3	-2352.5	-7.9
Corn	70.9	22.4	389.6	392.1	-672.1	-176.8	-3.1
Soybean	11.6	3.7	889.5	916.8	-174.7	-317.7	-4.8
Peanuts	5.9	4.3	1228.5	1833.4	-740.7	-3558.3	-59.5
Pork	18.0	12.1	3034.2	4706.7	0.0	-30037.5	-55.1
Cotton	3.5	3.8	3216.0	2655.1	0.0	1985.4	17.4

Source: (17,18, and 19)

Government data on subsidies are very limited. In fact, the only available information regarding budget expenditures on agricultural subsidies is the aggregate expenditures making up the difference between procurement prices and government resale prices to urban residents. A weighting scheme was developed based on the procurement amount and the ratio of market prices to government resale prices to allocate the total subsidies to each individual commodity. CSEs due to the rationing policy for major agricultural commodities are all positive (table 9), reflecting government support for urban consumers. The size of the urban subsidy varies and depends on the individual commodity. Staple foods are subsidized more heavily than non-staple foods. In 1986, prices of farm to non-farm sales for food grains, oilseed crops and meat were about 83, 57 and 4 percent higher than the corresponding urban subsidized prices (p.138). CSEs due to border measures, in general, are the same magnitude as the PSE but of the opposite sign.

V. RETRENCHMENT

In 1987 and 1988, the reluctance of China's leaders to initiate political reforms led them to make continued economic concessions to urban constituents and continue to support poorly managed state-run enterprises. The government financial burden continued to build and the inflation rates continued to rise. The inflation rate was 18.5 percent in 1988, and prices increased by more than 25 percent in the first quarter of 1989. China's enthusiasm for economic reforms in the past ten years has been dampened by four consecutive years (1985–88) of stagnation in grain production, high inflation rates, and political instability. As a result, the Communist Party Central Committee decided to increase central control and adopt austerity measures to slow down consumer spending in late March, 1989.

Since grain production had fallen short of targeted production and stayed below the record 1984 production level for four years since 1985, the government decided to make grain production a top priority in early 1989. The government raised procurement prices of food grains and cotton by 18 and 10 percent respectively, increased taxes on peasants who produce crops other than grains and cotton, and reimplemented many of the old centralized policies. For instance, the government again restricted the use of land for crops other than grain and cut off the flow of rural laborers to urban areas.

The economic retrenchment was successful in reducing inflation, which fell to around 6 percent in the first half-year of 1990. Recentralization of grain production did boost grain production to a record level of 407.5 million metric tons (mmt) in 1989, barely exceeding the 1984 level of 407.3 million. It is predicted that in 1990 grain production might even reach 435 mmt. However, overemphasis on grain production may have affected overall economic efficiency in rural China. A major problem in China's grain economy is the lack of price-guided markets to direct the supply and demand for grains. Increasing centralized control and emphasis only on grain production might have severe adverse effects on rural economic efficiency.

Table 9. Estimates of China's Consumer Subsidy Equivalent, 1986

Crop	Consumption	Consumer Price	Reference Price	Value of Subsidies	Policy transfers Border	CSE Percent
Units	Mil. metric tons	Yuan/Ton	Yuan/Ton	Mil. Yuans	Mil. Yuans	%
Rice	128.5	562.3	680.2	7434.7	15146.8	31.3
Wheat	95.4	496.6	522.7	4549.7	2491.2	14.9
Corn	65.5	389.6	392.1	3190.4	163.6	13.1
Soybean	10.4	889.5	916.8	582.6	285.1	9.4
Peanuts	5.6	1228.5	1833.4	1747.6	3399.5	74.6
Pork	17.6	3034.2	4706.7	2943.6	29502.0	60.6
Cotton	3.0	3216.0	2655.1	1363.3	-1669.7	-3.2

Source: (17,18, and 19)

VI. OUTLOOK

How China will affect international agricultural markets in the future hinges on the direction of its policy—whether it continues to employ government intervention in the agricultural sector or becomes more reliance on market-oriented systems.

GOVERNMENT INTERVENTION VS. ECONOMIC EFFICIENCY

In this section, the PSE/CSE estimates are compared with the corresponding economic efficiency index across major agricultural commodities to evaluate the possible effects of further reforms on grain production and trade.

Domestic production and prices of major agricultural commodities are distorted in comparison to their open market values. The calculated returns for these commodities show large price distortions if domestic producer prices are used. Since all of the major agricultural commodities are tradable internationally, the world prices are used to calculate the relative returns across major agricultural commodities. The quality in the input markets of fertilizer, labor, and other variable inputs do not vary significantly from producing one crop to another. Hence, the domestic prices of these inputs are used to calculate variable costs of production.

The net returns to variable inputs per ton of output produced are calculated as the ratio of value of a ton of output priced at its corresponding world price to the total variable costs of material and labor (valued in domestic prices) in producing the ton of output. This ratio shows the rate of return per yuan spent on variable inputs to produce this unit of output. Among the major grain crops produced in China, rice has the highest efficiency ratio of 2.75 (each yuan spent on variable inputs yields an output value of 2.75 yuan), as compared to 1.83 for wheat. When this set of economic efficiency indices is compared with PSE measures, it demonstrates that, in China, the heaviest government taxes fall on the crops that are produced most efficiently. Returns (relative to wheat) to fixed inputs, such as land, for major agricultural commodities are shown in Figure 1. The order of the return ratios for these commodities follows the order of magnitude of government taxes per unit of output for these crops.

PROSPECTS FOR TRADE

China has a population of more than 1.1 billion but only 96.7 million hectares (1 hectare = 2.47 acre) of cultivated land. Per capita income is still very low and capital for development is not readily available. Land and capital are relatively scarce resources and labor, in contrast, is an abundant resource. In theory, China should have a comparative advantage in engaging in labor-intensive enterprises such as textile or other light industries. Returns from manufacturing light industrial goods are much higher than from producing agricultural commodities.[3] Among agricultural commodities,

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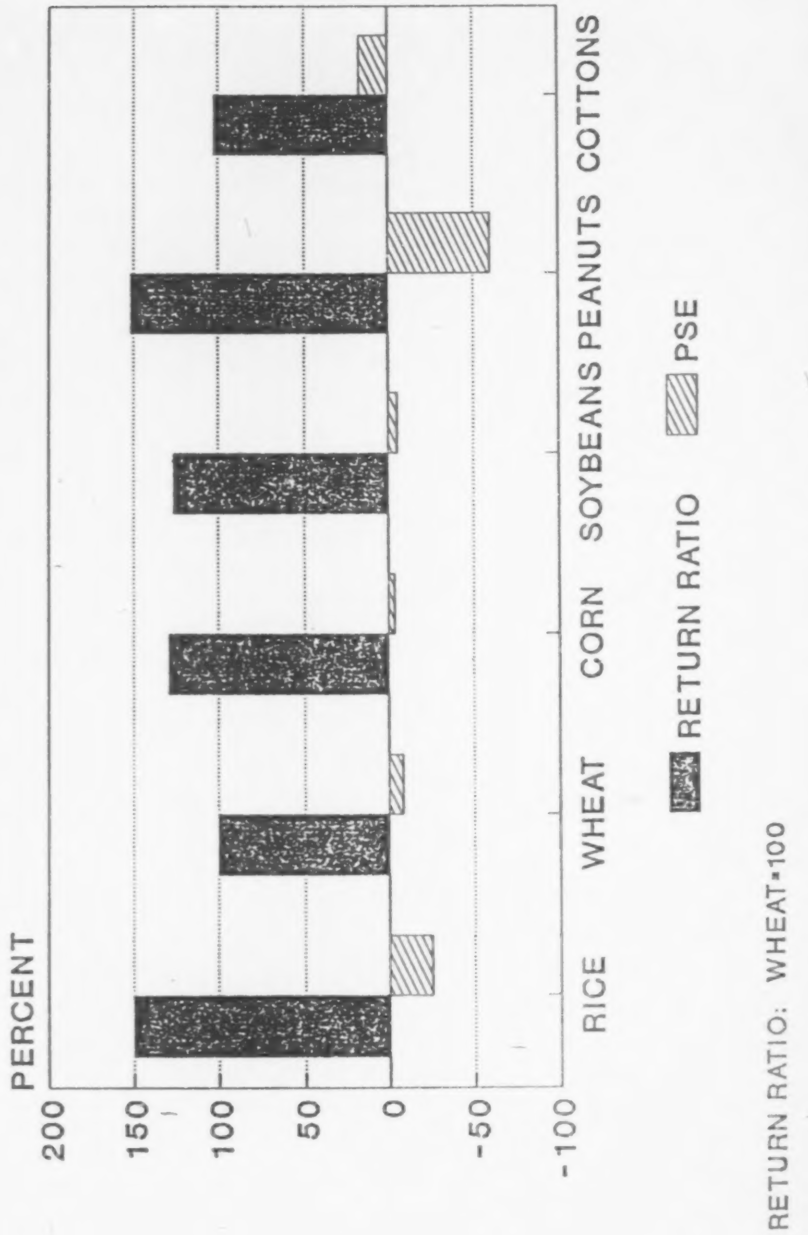
[3] This study used the per capita income earned in urban area (916 yuan) and rural area (463 yuan) in 1986 as a proxy for relative returns on light industries and farming activities. To more accurately assess comparative advantages of different activities, an economic efficiency index such as the one discussed in the previous section would need to be developed.

Figure 1. PSEs AND Returns for Selected Crops, CHINA, 1986



the returns for meat, aquatic products and other cash crops (e.g. fruits and vegetables) production are much higher than for grain crops and cotton. Hence, if economic reforms are to be continued—if the agricultural sector continues to decentralize, and economic efficiency is stressed—we can expect that grain production will decline in importance in China.

As mentioned previously, two of the most efficient crops, rice and peanuts, are the two most heavily taxed crops in China. Their domestic producer prices are about 70 and 50 percent below world market prices. Increasing liberalization in the agricultural sector will therefore encourage farmers to increase the production of these two crops and other cash crops which yield much higher profit margins.

If there were no border measures or procurement quota requirements, Chinese farmers could produce and export more rice and peanuts, but more wheat, soybeans and even corn would be imported. Wheat is more land-intensive than rice. In China, the labor requirement for rice is about 131 work days per acre sown as compared to 83 work days for wheat. Because land is a relatively scarce resource and labor a relatively abundant resource, China should have a comparative advantage in growing rice vis-a-vis wheat.

China's continued reforms would likely mean increased decentralization and, consequently, a more diversified economic structure in which more types and levels of economic activities will help maximize net economic returns to the society. However, current austerity measures adopted by the state to deal with inflation problems and stagnation in grain production appear to have put economic reforms on hold and the continuing austerity program certainly will have an adverse effect on China's longterm prospects as a promising market for foreign grain and cotton exporters.

If, however, China's economic reforms continue and government controls are further relaxed, the country would become a very promising market for major grain and cotton exporters, because returns to grain crops (with the possible exception of rice) are lower than cash crops and other economic activities. Currently, grain crop production is kept relatively high mainly because of government intervention. Since the peasants' objective is to maximize net returns, the production of these crops should decrease as government intervention is gradually removed.

In the next 10 years, per capita income would grow with continuous and successful economic reforms. Increases in household income would certainly see an increase in consumption of wheat, meat, dairy products, etc. as consumers improve their diets. The increasing demand for wheat for food consumption and feed demand for corn and soybeans would accompany increases in income, leading to a potential increase in grain imports.

If, however, China continues current austerity measures emphasizing grain production and maintaining grain self-sufficiency, the outlook for the agriculture sector will likely be just an extension of the situation in 1989 and 1990. Under this policy regime, despite higher grain output, the 1990s are expected to be characterized by slow overall economic growth. Total grain production may at best reach 500 mmt and China will maintain low levels of wheat imports, probably only 15–20 million metric tons. However this import level might further restrained by the lack of foreign exchange. China's ability to import wheat in the 1990s would be curtailed sharply if Uruguay Round of the agricultural trade negotiations reach a consensus and wheat prices increase in the international markets.

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PRIMARY ISSUES IN CHINA'S GRAIN ECONOMY IN THE 1990s

By Frederick W. Crook *

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I. INTRODUCTION

A. SUMMARY

China has the world's largest grain economy. Authorities in Beijing define grain to include wheat, rice, corn, sorghum, millet, barley, oats, soybeans, potatoes, and other grains (buckwheat, field peas, and beans). China is the world's foremost producer of rice and is a major producer of many of the crops listed above. China is probably the world's largest holder of grain stocks. It is a major exporter of rice, corn, and sorghum, but is also, at various times, one of the world's largest importers of wheat. This grain economy supports the world's largest population, but the 1.1 billion population also means that China does not have large per capita grain surpluses. It produces large quantities of feed grains which supports the world's largest hog industry and one of the world's largest brewing industries. The functioning of this grain economy affects important aspects of China's overall economic development, and through international grain markets, it affects American farmers and the U.S. economy.

In the next ten years important changes are likely to occur in China which will affect the grain economy. Rather than describe all the possible scenarios, this paper examines the two most likely to occur: one in which there is no major change in policies and institutions, and a second, in which "reforms" are initiated which increasingly use markets to solve basic economic problems.

Land for Grain to Decline in 1990s

In the coming decade, economic growth will foster new residential housing, factories, roads, and airfields which will reduce available cultivated land. Area sown to grain crops in both the "no change" and "reform" scenarios will probably decrease as a result, and also because profit margins for raising grain are likely to be less than that for raising other crops.

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* Economic Research Service, U.S. Department of Agriculture.

Slower Growth for Grain Yields

From 1979 to 1984 yields increased at an annual average rate of 5.3 percent, but the rate of growth slowed to only 1 percent in the 1985–89 period. In the "no change" scenario, yields are forecast at 1.5 percent, similar to the rate in the past four years. In the "reform" scenario, incentives will encourage farmers to boost yields to 1.9 percent a year—still well below the rate of the early 1980s.

Grain Production to Grow at a Slower Pace in the 1990s

By the year 2000, grain production likely will not reach the target of 500 million tons set by China's authorities. With falling grain area and slowly rising yields, grain output is forecast to range from 459 to 466 million tons.

Reforms Could Substantially Affect Grain Marketing

The termination of the grain purchase and supply system would raise grain prices for urban consumers, which could exacerbate tensions in the cities. But over the decade, greater reliance on market forces will discipline producers to supply the proper kinds of grain to users and encourage consumers to use scarce grain resources more efficiently. Alternatively, the use of the present grain purchase and supply system will continue to drastically distort incentives for producers, insure enormous government budget deficits to finance the gap between purchase and retail prices, and encourage black markets in the cities.

Reforms Alter Grain Stocks

The break-up of the commune system encouraged farm families to store grain, and farmers are now holding large quantities of grain stocks. The "no change" scenario predicts grain stocks will rise to 86 million tons by 2000, about 20 percent of consumption. In the "Reform" scenario, Government authorities will continue to set aside grain for strategic purposes and to maintain market stability, but the actual quantity of stocks could fall as grain holding companies (or entities) use grain prices and interest rates to calculate benefits and costs for storing grain.

Cereals vs. Feed

The "no change" scenario predicts that per capita cereal consumption will be reduced by several kilograms by 2000 as output is shifted to feed grains. To close the gap between supply and demand for feed grains, government authorities likely will switch some grain from the food to the feed category; try to implement grain saving programs by improving feeding efficiencies and switching from pork to poultry production; and try to restrain the growth of the livestock sector.

Grain Exports

In the "no change" scenario, China's grain exports are forecast to decrease because of increasing domestic demand for cereals and feed. In the "reform" scenario, exports of rice, corn, potatoes and sorghum likely will increase.

Grain Imports

The "no change" scenario predicts that grain imports will rise to nearly 23 million tons. Most of the imported grain will be wheat, but small quantities of feed grain also will be imported to support livestock feeding operations in suburban areas. In the "reform" scenario, large quantities of wheat likely will be imported, but if China's consumer demand for meat parallels that of compatriots in Taiwan and Hong Kong and if government authorities allow foreign exchange to be used, then large quantities of feed grains could be imported also.

B. PURPOSE AND SOURCES

The purpose of this paper is to highlight primary issues in China's grain economy in the 1990s. Issues explored include limitations on cultivated land, yield prospects, marketing arrangements, stocks, adequacy of grain for cereal and feed consumption, and grain exports and imports. The analysis of each issue includes a short review of institutions and trends to place the issue in proper historical perspective. Projected features of the grain economy in the coming decade are then sketched by examining how problems would be solved if "reforms" are initiated or alternatively, if there is "no change" in existing policies and institutions.

In the "no change" scenario it is assumed that structures and policies in place in 1990 persist throughout the decade. China's leaders are expected to make few major changes in the economic and political system in the 1990s. They will probably make minor adjustments in the system in response to changing conditions and priorities but could experiment with some reform measures such as the Zhengzhou (Honan Province) wholesale grain market. In the "reform" scenario it is assumed that China's leaders will initiate reforms similar to those begun in the 1979–84 period. Markets will be frequently used to solve economic problems. Firms will increase the use of comparative advantage and regions will specialize. Factors of production will enjoy greater mobility. The government will continue to play a major role in the economy, but will use more indirect means such as taxes and subsidies rather than direct management of the economy as in past decades. The central government will continue to manage foreign trade and will follow patterns similar to those in Japan, South Korea, and Taiwan. The government will modify its self-sufficiency policy and will adjust the grain purchase and supply system accordingly.

This paper is based on historical data for area, yield, production, consumption, and trade which came from statistical yearbooks published by China's State Statistical Bureau, the Ministry of Agriculture, the Ministry of Commerce, and U.S. Department of Agriculture's "World Agricultural Supply and Demand Estimates." [1] The bulk of the report is based on previous work completed by USDA's Economic Research Service's China Section.[2] Studies of China's grain economy by China's government authorities and scholars, U.S., and foreign scholars were used in preparing this report.[3]

II. WHAT ARE LAND AND POPULATION LIMITS FOR GRAIN PRODUCTION?

China's cultivated land base decreased from 107.9 million hectares in 1952 to an estimated 95.6 million in 1990. Cultivated land is defined as the area farmers plow up each year to plant crops. Over the past four decades, new factories, roads, airfields, dams, ports, and houses used up more cultivated land than was replaced by reclamation projects.

China's population rose from 574 million in 1952 to an estimated 1.11 billion in 1990. The combination of more people and less land prompted farmers to use available area more intensively, availing themselves of such techniques as intercropping and planting more crops on the same piece of land during one cropping year. Actual sown area is therefore about 1.5 times as much as cultivated land. Sown area increased from 141.3 million hectares in 1952 to an estimated 147 million in 1990.

Rising population and decreasing cultivated land reduced per capita cultivated area by more than half from 0.188 hectares in 1952 to 0.086 by 1990. On the average, each citizen is supported by 853 square meters (there are 10,000 square meters in a hectare) of cultivated land which is roughly equivalent in area to two basketball courts. By comparison, each citizen in the United States is supported by 7,350 square meters of cropland.

Analysts in both China's Ministry of Agriculture and the USDA forecast that continued economic growth and the building of infrastructure projects in the 1990s will reduce cultivated land area.[4] If reforms are implemented, USDA analysts forecast cultivated land will decrease from 95.3 million hectares in 1990 to 93 million in 2000. This means that with an expected population of 1.28 billion by 2000 each citizen will be supported by only 728 square meters of cultivated land (Figure 1).

A review of past trends provides perspective on how farmers dealt with this issue in past decades. China's rural statistical system reports three categories of sown area data: grain crops (defined above); economic crops (cotton, oilseeds, and sugar crops); and

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[1] Agricultural Yearbook Editing Committee, Minister He Kang, Chairman, Zhongguo Nongye Nianjian, 1988 (China Agricultural Yearbook, 1988), Beijing, Nongye Chubanshe, 1989.

[2] Frederick W. Crook, "China's Grain Production to the Year 2000," China, Agriculture and Trade Report: Situation and Outlook Series, U.S. Department of Agriculture, Economic Research Service, June 1988, pp. 30–38.

[3] Joseph R. Goldberg, "Grain Options for China—1990–2000," in T.C. Tso, Editor, *Agricultural Reform and Development in China*, published by Ideals Incorporated, Beltsville, MD, 1990, pp. 113–122. Also see Colin A. Carter and Zhong Fu Ning, *China's Grain Production and Trade: An Economic Analysis*, Westview Press, Boulder, CO, 1988.

[4] See Frederick W. Crook, "Allocation of Crop Sown Area: Analysis of Trends and Outlook for the Future," *China, Agriculture and Trade Report, Situation and Outlook Series*, U.S. Department of Agriculture, Economic Research Service, July 1990, pp. 37–44; and State Council, Research Center for Rural Development, and Institute of Agricultural Economics, Chinese Academy of Agricultural Sciences, *Zhongguo Nongcun Fazhan Zhanlue Wenti (Problems in China's Rural Development Strategy)*, Beijing, Zhongguo nongye keji Chubanshe, Nov. 1985.

Figure 1
Per Capita Cultivated and Sown Area, 1952-2000

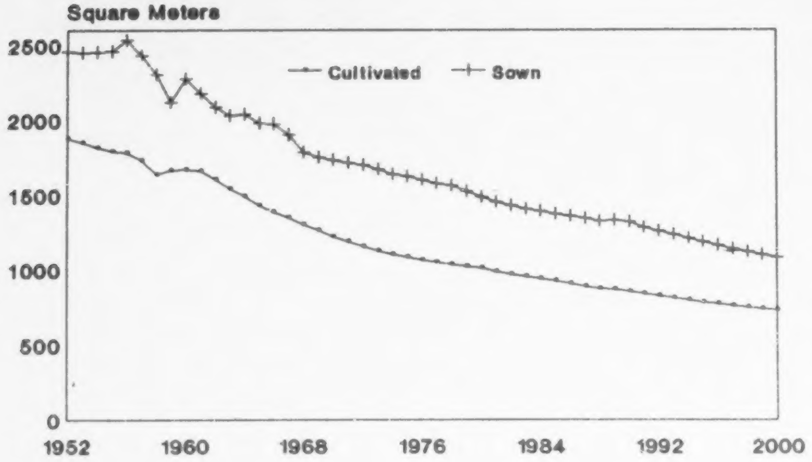
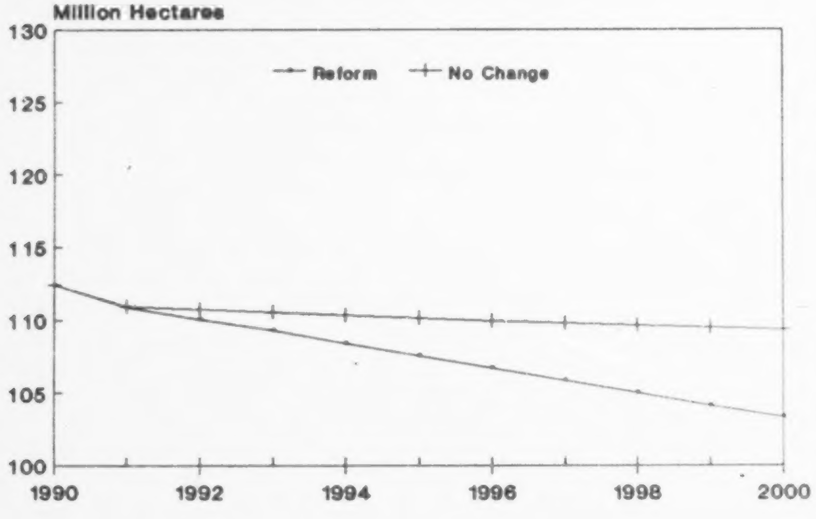


Figure 2
Grain Area Estimates, 1990-2000



other crops (fruits, vegetables, and forage). Grain crops fell from 124 million hectares in 1952 (87.8 percent of total sown area) to roughly 112 million in 1990 (76.2 percent), an annual average decrease of 2.1 percent. Area sown to economic and other crops expanded accordingly.

If China holds to a "no change" strategy, USDA analysts forecast that cultivated area will decrease from 95.3 million hectares in 1990 to 94 million in 2000. The area sown to grain will fall from 112.4 million hectares (76.2 percent of total sown area) to 109.4 million in 2000 (75.3 percent). Grain area will fall because of the decrease in cultivated area and because land will be shifted to raising economic crops. Government policy stressing the importance of grain in the economy will be a countervailing force limiting the decrease (Figure 2).

If China's leaders initiate additional reforms in the 1990s, economic growth will expand and infrastructure projects will increase, reducing the cultivated land base from 95.3 million hectares in 1990 to 93 million in 2000. With less stress on grain production, farmers likely will allocate marginal grain growing land to more profitable uses. Area sown to grain crops are forecast to fall from 112.4 million hectares (76.2 percent of total sown area) in 1990 to 103.3 million in 2000 (74.8 percent).

III. WHAT ARE THE PROSPECTS FOR YIELD AND PRODUCTION?

Grain yields rose from 1.3 metric tons per hectare in 1952 to 3.6 in 1989, an annual average growth rate of 2.8 percent. China's farmers probably will not be able to sustain this growth rate in the 1990s in either the "reform" or "no change" scenario. Yield increases in the coming decade will depend on both technical and economic factors.

WHAT ARE THE TECHNICAL PROSPECTS FOR GROWTH IN GRAIN YIELDS?

Expansion of irrigated area and drainage systems in the past three decades greatly boosted grain yields. Low-cost, efficient projects have already been completed; additional irrigated area can only be completed at much higher costs. Tube-well irrigation in the North China Plain greatly boosted yields, but reports suggest that the water table is falling in the area, making it difficult for farmers even to maintain their irrigation system.[5] Little yield increase can be expected from irrigation.

The use of chemical fertilizers greatly increased in the past three decades, from 78,000 tons in 1954 (nutrient weight basis) to 23.7 million tons in 1989. China's planners expect fertilizer output to increase from 90 million tons in 1990 to 150 million tons (product weight basis) by 2000.[6] Especially important will be the increase in output of phosphorous and potassium fertilizers which will help balance the current preponderance of nitrogen fertilizers. The expansion of fertilizers could boost grain yields, provided there is a proper mix of economic incentives.

China's farmers already use high-yield seeds. About 42 percent of total grain area is sown with hybrid rice and corn seed and improved varieties of wheat.[7] Plant breeders have been most active in raising wheat, rice, and corn yields, but some improvements probably can yet made for these grain crops. Plant breeders could well expand yields for barley, sorghum, oats, soybeans, and potatoes.

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[5] Jiang Zaizhong, "State Councilor Chen Junsheng Urges Water Saving Agriculture," Beijing, Xinhua Domestic, Mar. 7, 1990; translated in U.S. FBIS, CHI-90, No. 48, Mar. 12, 1990, p. 33. Also see Wen Jia, "Crops Gain in Plan That Save Water," *China Daily*, Mar. 22, 1990, p. 3.

[6] "More Fertilizers for More Grain," *China Daily*, May 5, 1990, p.2.

[7] "Jinnian Tuiguang Sanda Liangshi Tsowu Liangzhong Bozhong Zhongmianji Yuji Da 7.1 Yimu" ("This Year Improved Seeds for the Big Three Grain Crops Are Estimated to Reach 7.1 Hundred Million Mu"), *Renmin Ribao*, Mar. 1, 1990.

The agricultural extension system supported yield growth in the past three decades and can be expected to maintain that support in the coming decade. Continued reforms would encourage individual farmers to use cultivation practices which would raise yields, reduce costs, and boost profits.

Table 1 lists wheat, rice (milled), and corn yields for China and selected countries. The comparison of China's grain yields with those from other countries clearly shows that China's farmers already are producing world class grain yields. For example, in 1989 only three countries had higher rice yields than China: Japan, Australia, and the United States. Clearly, if U.S. farmers can obtain 4.4 tons per hectare there are no technical reasons why China's farmers cannot replicate those yields. Some yield growth will occur in the 1990s, although China's yields are already very high.[8]

WHAT ARE THE ECONOMIC PROSPECTS FOR GROWTH IN GRAIN YIELDS?

There are not strong economic incentives to boost grain yields in the "no change" scenario. Government policy and prices in the period from 1985–89 provided an economic environment in which farmers could earn more money raising economic crops and working in rural industries. For example, farmers in this period earned 498 yuan per hectare raising wheat compared with 711 for peanuts, 1,180 for cotton, and 1,882 for sugarcane.[9] The Government's grain purchase and supply system embodies considerable coercive elements which greatly reduce incentives to produce grain.

From 1984 to 1989, grain yields rose from 3.608 tons per hectare to 3.632, an annual average growth rate of only 0.13 percent. If this same policy and price package is projected to the year 2000, then the combined effect of technological and economic factors is projected to produce a yield growth of 1.456 percent a year (Figure 3).

Economic incentives for grain production in the "reform" scenario are complex. As market forces increase in the economy, grain producers and consumers will make adjustments. Before reforms are implemented, it is difficult to predict how grain farmers will respond. As the government grain purchase and supply system is altered, urban grain prices likely will rise. Urban residents and in-

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[8] One possible explanation for high grain yields is that China's statistical authorities may underestimate grain area and production. From travel in rural areas and discussions with many rural authorities our general impression is that there is more grain in rural areas than is reported. While constructing grain supply and use balance sheets and working with livestock production and feed requirements we have noted a discrepancy—using official PRC data there is a gap between grain use for cereals and feed and meat output. Given official data there is not enough grain in China to sustain such a large population and still have enough grain to produce the kind of meat that they report. One possible explanation for this discrepancy is that farmers underreport grain area and production. The unreported grain is fed to livestock which boosts farm income. In this case perhaps grain yields are not as high as reported which means that further yield growth is possible if the proper technical and economic environment is created. See Frederick W. Crook, "Notes on China's Grain Supply and Use: A Trip Report," U.S. Department of Agriculture, Economic Research Service, International Economics Division, September 1986, p. 7.

[9] In 1987 3.72 yuan equalled 1 U.S. dollar. U.S. Department of Agriculture, Economic Research Service, Agriculture and Trade Analysis Division, China Section, "China Agricultural Statistics Data Base," January 1990; and Agricultural Yearbook Editing Committee, Minister He Kang, Chairman, *Zhongguo Nongye Nianjian, 1987 (China Agricultural Yearbook, 1987)*, Beijing, Nongye Chubanshe, 1988, pp. 393–394.

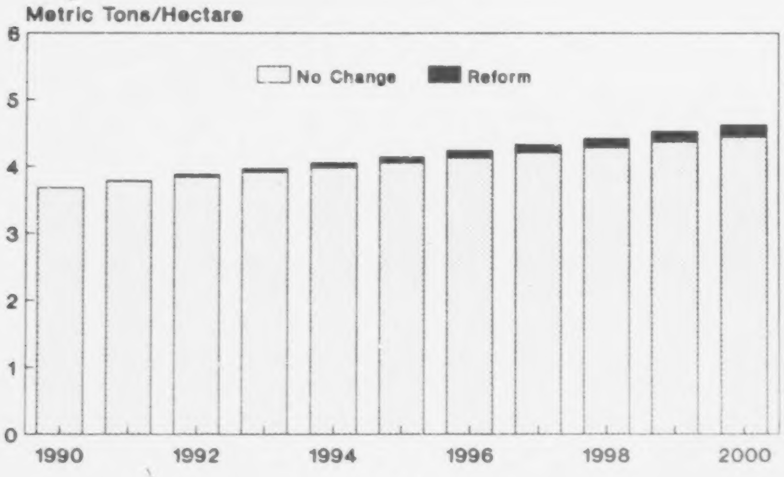
TABLE 1. China's wheat, rice and corn yields compared with selected countries.

tons per hectare

Country	Production conditions for wheat	Wheat 1989	Rice 1989	Corn 1989
China	mostly irrigated	3.04	3.90	3.88
Pakistan	mostly irrigated	1.87	1.53	1.44
India	mostly irrigated	2.24	1.69	1.33
Mexico	mostly irrigated	4.12	2.62	1.72
Japan	mostly irrigated	3.47	4.49	2.00
Australia	mostly dry fields	1.56	5.86	3.61
Argentina	mostly dry fields	1.86	2.15	3.09
USSR	mostly dry fields	1.94	2.56	3.71
Poland	mostly dry fields	3.87	n.a.	5.00
France	mostly dry fields	6.35	3.53	6.76
Canada	mostly dry fields	2.06	n.a.	6.25
United States	mostly dry fields	2.51	4.40	7.39

Source: USDA Data, August 1990.

Figure 3
Forecasts For Grain Yields
For "No Change" and "Reform" Scenarios



dustrial users of grain will initiate grain substitution and conservation strategies. Government pressure (primarily using coercive elements) to continually increase grain production will subside and farmers will begin to respond more to market pressures. In this case there will probably be less demand for rice and coarse grains for human consumption, but the demand for grain in the form of livestock products, meat, eggs, fish, and milk may well increase. Individual farmers will have an interest in raising grain yields and cutting costs of production.

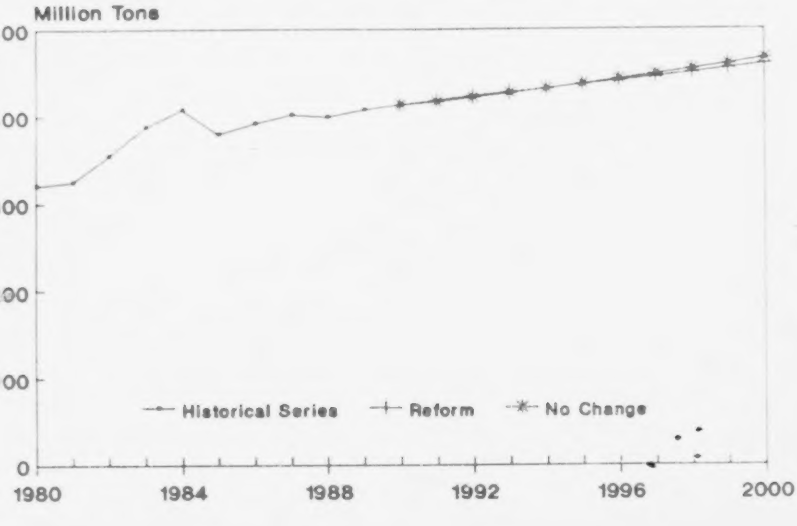
From 1979 to 1984 grain yields increased at an annual average rate of 5.3 percent. In the "reform" scenario, the combined effects of technological and economic factors will boost yields only slightly to 1.851 percent a year. In sum, rapid yield increases are not expected for either the "no change" or the "reform" scenario.

GRAIN PRODUCTION BY THE YEAR 2000

These area and yield estimates for the "no change" and "reform" scenarios suggest that the annual average growth rate for grain production in the 1990s will be considerably lower than the rates for the previous two decades, and production by 2000 will range from 459–466 million tons compared with China's goal of 500 million tons.[10]

Grain production rose from 160 million tons in 1952 to 407 million in 1989, an annual average growth rate of 2.55 percent. During the turbulent "Great Leap Forward" period (1958–63) grain production fell by minus 2.36 percent a year. In the 15-year period from the end of the "Great Leap Forward" to the beginning of reforms in 1978, grain output increased at an annual rate of 4.39 percent. During the initial phase of the reform decade (1978–84), the growth rate jumped to 5.24 percent a year. But in the five-year period from 1984 to 1989, there was no growth in grain output because price and incentive policies introduced in 1985 discouraged further growth. In the "no change" scenario the growth rate is only 1.22 percent, well below the rapid growth rates of the past. The growth rate for the "reform" scenario is even slower at 1.09 percent (Figure 4).

Figure 4
Grain Production, 1980-2000



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[10] Chinese Academy of Agricultural Sciences, "Analyses on Long-Term Development of Grain Production in China," *Zhongguo Nongye Kexue (Scientia Agricultura Sinica)*, No. 5, 1987, pp. 1–5; translated in U.S. JPRS, CAR-88, No. 11, Mar. 8, 1988, pp.29-33. See also "More Fertilizers for More Grain," *China Daily*, Beijing, May 5, 1990, p. 2.

IV. How Will Grain Be Marketed?

For hundreds of years China's grain flowed through marketing channels shaped by three elements. First, China's farmers produced grain primarily for their own use and only secondarily for the market. Second, local and regional grain markets were the primary means of linking supply with urban demand. Third, the central government often intervened in the marketing of grain to supply the requirements of military border garrisons and civil servants in the capital, to generate revenue to sustain government functions, and to stabilize market prices.

In 1953-55 China's leaders chose to disrupt this ancient grain marketing system by eliminating the use of grain markets. The government established a grain purchase and supply system which forced farmers to sell their excess grain to purchase stations at government-fixed prices.[11] The Grain Bureau stored, transported, milled, and sold grain to urban residents and government workers at relatively low fixed prices. These citizens were issued grain ration coupons based on their age, sex, and occupation related to caloric requirements. Only citizens with coupons could purchase grain at government- owned retail shops. Since 1955, government leaders have used monopsonist pricing practices to capture gains from agriculture to support national development projects. To increase farm marketings in the early 1960s, the government increased grain purchase prices while holding retail prices firm. The government subsidized the difference between farm gate and retail prices from government revenues. In 1978, the price subsidy for all agricultural products was only 5.6 billion yuan, but by 1987 it had grown to 50 billion yuan—a large chunk of the government's budget.[12]

In the early 1980s, the government allowed local free markets to function again. But it also has prohibited farmers from selling grain in those markets until they delivered grain purchase quotas to government-owned grain stations. Currently, farmers agree to sell part of the grain to the government based on local open market prices.[13] Given this historical context, how will the government relate to grain marketing in the 1990s? Will it continue the current system, or will it return to more traditional practices that rely more heavily on markets?

NO CHANGE IN GRAIN MARKETING SCHEME

In the "no change" scenario, the government is expected to purchase large quantities of grain and keep the retail price of grain low—and to have difficulty financing the subsidy. In the 1980-87 period the government purchased about 30 percent of production. If this ratio is maintained, by the year 2000 the government will purchase over 140 million tons of grain a year. Assuming that the government will not be able to face urban unrest stemming from increasing retail prices for staple grains, then purchasing this quantity of grain will be very expensive. Either the government will have to raise the purchase price to encourage more production from farmers—which will make the subsidy problem even more severe—or it will have to increase the use of coercive elements, making rural residents even more unhappy than they already are. As the economy becomes more complex, government bureaucrats will have an increasingly difficult time trying to equilibrate supplies with demand for grain for use as cereals, in industry (starch and alcohol) and as feed.

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[11] Audrey Donnithorne, *China's Economic System*, Praeger Publishers, New York, 1967, pp.337-364.

[12] Hao Si, "Price Subsidies—A Heavy Burden for the Chinese Government," Zhongguo Tongxun She, Hong Kong, Jul. 1, 1988; translated in U.S. FBIS, CHI-88, No. 128, July 5, 1988, p. 48.

[13] Nickolas R. Lardy, *China's Interprovincial Grain Marketing and Import Demand*, U.S. Department of Agriculture, Economic Research Service, Agriculture and Trade Analysis Division, Staff Report No. AGES 9059, Sep. 1990.

REFORM OF THE GRAIN MARKETING SYSTEM

In the "reform" scenario, open market activity likely will increase so that resources will be allocated more efficiently. In the past few years, grain stations have paid a special price for above-contract grain. These prices were based on open market prices and grain purchased at this higher price was passed to users such as restaurants, factories, and feed mills that in turn passed the costs to end users. As an increasing quantity of grain is sold at higher retail prices, urban consumers will adjust their consumption patterns and will begin to conserve grain. These adjustments may alter the specific kinds of grain grown, i.e., more corn embodied in livestock products and less rice production.

The government will have difficulty weaning the urban population away from low-priced grain. For almost 40 years city dwellers have had cheap grain, which has become an income subsidy because they receive more grain than they require and sold their excess coupons in the black market for cash or trade them for other commodities.[14]

The government will continue to be a player in grain markets to facilitate grain transactions, grading, storing, strategic stocks, stocks to dampen fluctuations in the market, and will have some kind of control of international grain transactions. Internal transportation problems will continue to hinder grain marketing in the coming decade. But increasingly, markets will allocate grains to users, which in turn will prompt producers to grow the kinds of grain consumers want.

V. What Quantity of Grain Stocks Will Be Maintained?

In the 1949-84 period, the government took primary responsibility for maintaining grain stocks. There is little information about grain stocks because the government considers such data a state secret. Grain stock information in Figure 5 came from the construction of grain supply and use tables which used available production, import, export, and consumption data to estimate stock numbers.[15] In 1961 stocks reached an estimated low of about 10 million tons, only 7.3 percent of grain consumption, but in 1985 they peaked at 111 million tons, 32 percent of consumption. Note that stocks are estimated to have fallen sharply since 1985 (Figure 5).

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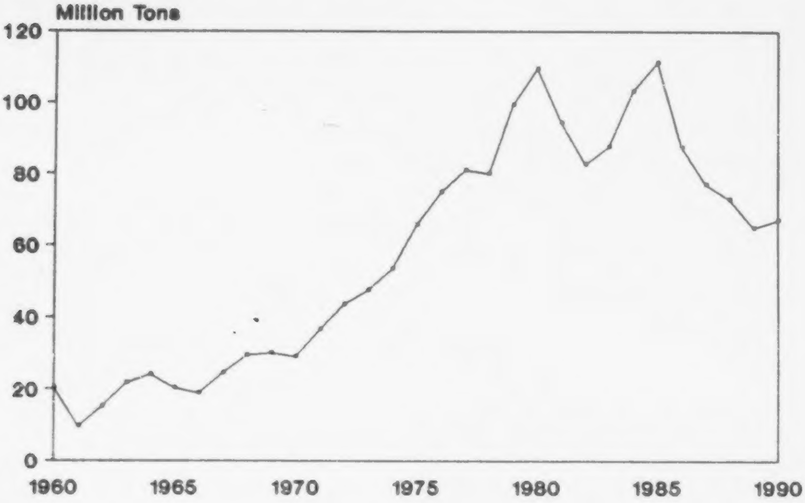
[14] James P. Houck, "Parallel Markets, Price Theory, and China's Grain Policy," Department of Agricultural and Applied Economics, University of Minnesota, St. Paul, Minnesota, Staff Paper No. P89-21, June 1989.

[15] Frederick W. Crook, "China's Grain Supply and Use Balance Sheets," *China, Agriculture and Trade Report: Situation and Outlook Series*, U.S. Department of Agriculture, Economic Research Service, June 1988, pp. 22-29.

Figure 5
China's Grain Stocks



STOCKS IN THE "NO CHANGE" SCENARIO

Grain stocks fell sharply from 1985-89 because production increases stalled, grain exports increased, domestic demand for grain surged, and imports slowed for a time. By the end of 1990, stocks were assumed to be 71 million tons, or 19 percent of consumption. Throughout the 1990s, the government likely will slowly build stocks to about 86 million tons, about 20 percent of consumption.

In 1984 the commune system was reorganized into the township-household contract system.[16] Under this system, farm households made contracts with economic cooperatives to farm parcels of land and sell specified quantities of goods to the state, and were permitted to sell surpluses in local markets or consume the goods themselves. In this economic environment, households have begun to store grain. There is little quantitative data on the aggregate size of on-farm grain stocks. The author visited numerous farm families in various parts of China during the 1987-90 period and found that farmers routinely stored grain as an insurance policy against ill health, crop failures, and fluctuations in purchase prices.[17]

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[16] See U.S. Congress, Joint Economic Committee, *China's Economy Looks Toward the Year 2000, Vol. 1, The Four Modernizations*, May 1986, pp. 354-375 for a brief description of the new household contract system.

[17] Frederick W. Crook, "Reports on Rural People's Communes (Townships)," unpublished data set, Great Falls, VA.

STOCKS IN THE "REFORM" SCENARIO

In the "reform" scenario three institutions will hold grain stocks. First, the government will hold some grain for strategic reasons and as a buffer to maintain orderly markets. Second, farm families will continue to hold grain stocks. This will be especially true in areas where the probability for crop failures is high and transportation networks are not well developed to bring food and feed grains into areas suffering from disasters. Third, grain companies may begin to hold grain stocks.

It is difficult to forecast the quantity of grain stocks held under the "reform" scenario. As markets become more important, prices and interest rates are expected to become increasingly important in determining stock levels. Currently the costs for grain stocks are hidden from consumers. In the reform scenario these costs will become more transparent and grain stocks could be reduced.

VI. How Will Grain Be Consumed?

For hundreds of years China's consumers have subsisted primarily on a diet of grains supplemented with beans, vegetable oil, vegetables, fruits, sugar, and a little meat. In the early 1930s, for example, 93 percent of the calories in rural diets came from grains, while animal products accounted for a little over 2 percent.[18] Per capita food grain consumption rose from an estimated 170 kilograms in 1950 to a peak of 226 kilos in 1956. Consumption fell to 169 kilos in 1961 during the "Great Leap Forward", but rose steadily to 246 kilos in 1984. Note that after 1961 per capita consumption did not exceed the 1956 peak until 1979 (Figure 6).

Since 1949 China's consumers have eaten an increasing quantity of meat. Per capita annual red meat consumption rose from 5.9 kilograms in 1952 to 21.1 kilograms in 1989. Pork accounts for over 90 percent of the meat production. Since 1962, when meat consumption hit a low of 2.9 kilos, consumption rose at an average rate of 8.3 percent per year. An increasing number of citizens are choosing to consume grain both as a cereal and as livestock products which have come from grain-fed livestock. This rapid rise in meat output implies feed grain consumption rose from an estimated 8.5 million tons (5.9 percent of total grain production) in 1952 to 92 million (22.6 percent) in 1989 (Figure 7).[19]

Also since 1949 increasing quantities of grain have been used to manufacture alcoholic beverages. Beer (barley) and distilled liquor such as maotai (sorghum) output have risen especially fast in the 1980s, so that by 1988 12.5 million tons of grain were allocated to the beverage industry.[20]

Each season a percentage of China's grain harvest is lost during harvesting, transporting, storing, and processing. Authorities in China estimated in the mid 1980s that about 15 percent of the crop

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[18] John L. Buck, *Land Utilization in China*, The University of Chicago Press, Chicago, Illinois, 1937, p. 411.

[19] Francis C. Tuan, *China's Livestock Sector*, U.S. Department of Agriculture, Economic Research Service, International Economics Division, FAER, No. 226, April 1987, p. 39.

[20] "Booze Boom Against the Grain," *China Daily*, Nov. 23, 1988.

Figure 6
Per Capita Grain Consumption, 1960-89

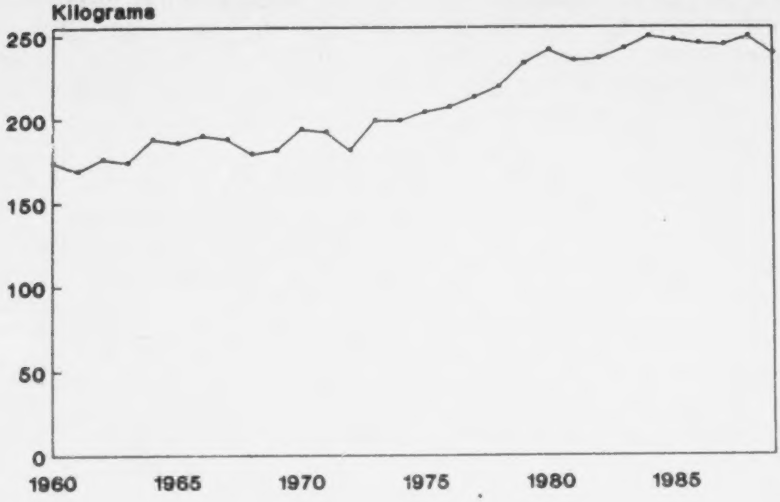
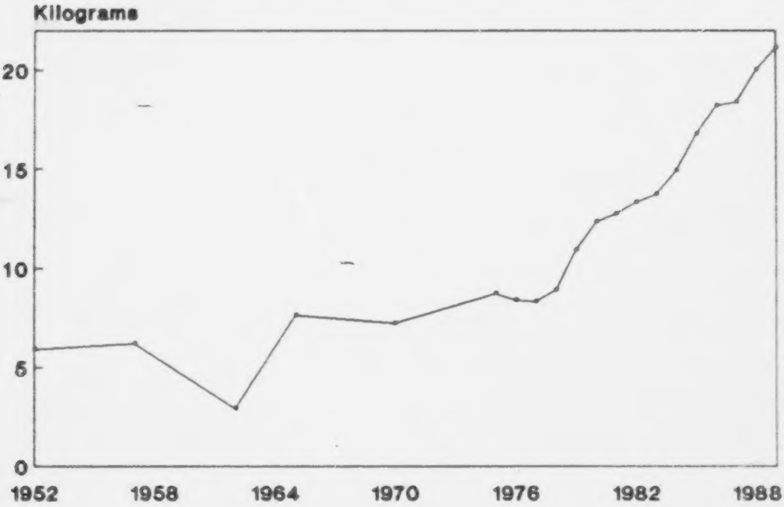


Figure 7
Per Capita Meat Consumption, 1952-89



dropped out of their grain system into the waste category (about 57 million tons in 1985).[21]

GRAIN VS. MEAT CONSUMPTION IN THE "NO CHANGE" SCENARIO

The "no change" scenario assumes that current policies and institutions will remain in place to the year 2000. Government authorities will allocate scarce grain resources to competing users. Grain allocated for cereal consumption is forecast to decrease slightly from 240 kilograms per capita in 1990 to 238 kilos by 2000. In the next ten years, government-led efforts will be made to build better storage facilities to reduce the waste grain ratio. But these efforts will be partly blunted by the cheap grain policy which leads to misuse of this resource. As incomes rise, citizens will also want to consume greater quantities of grain in the form of alcoholic beverages, which will reduce the quantities available for cereal use.

The primary problem for government authorities will be to find feed grains to support the growing livestock population. Given falling cultivated land area, decreasing area sown to grain crops, slowly rising grain yields, and government policy preference to maintain basic food cereal rations, then forecasted feed grain output does not match meat production goals. Differences in demand and supply conditions for feed grains can be resolved by either 1) augmenting feed grain production by reducing grain for cereals and industrial use; 2) increasing feeding efficiency; 3) adjusting growth rates of livestock products; or 4) allocating foreign exchange to purchase feed grains in the international market.

First, allocation of grain for cereal and industrial uses are already fairly close to the margin. Given China's natural resources, little can be done in the short term to expand grain production. China's authorities have little room to maneuver with regard to shifting grain production from cereals to feed grain. When push comes to shove, the allocation question will turn on whether to consume grains directly as cereals or as meat. Given this choice, central planners likely will choose cereals.

Second, more adjustments probably will be made in livestock production targets. In the mid-1980s, government authorities, flushed with full grain bins, announced plans to expand total meat output by 2000 to 27.8 to 30 million tons. A "food basket" project was initiated to increase the supply of meat to urban residents. Resources were allocated to improve storage and transportation facilities and to build animal breeding stations, feed mills, and modern livestock feeding operations near large urban areas. But as increases in grain production levelled off from 1985 to 1989, government leaders began to initiate grain-saving strategies. Poultry production was encouraged because chickens are better converters of grain to meat than hogs. Authorities also promoted the production of ruminant animals like goats and sheep because they can convert grass to meat and thus conserve on grain consumption.[22]

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[21] Tang Qingzhong, "Woguo liangshi shouhou jiagong sunshi yenzhong" ("There Are Serious Post Harvest Grain Losses in My Country"), *Renmin Ribao (People's Daily)*, Beijing, Jan. 8, 1989, p. 1.

[22] "State Council Circular on Nonstaple Food," Xinhua Domestic Service, Beijing, Sep. 6, 1990,; translated in U.S. FBIS, CHI-90, No. 175, Sep. 10, 1990, pp. 44–46.

Third, central planners could decide to import large quantities of feed grains. A review of China's grain imports reveals that corn and barley have been imported. Barley has been imported primarily to meet the demand for brewing. Corn in past decades has been imported primarily to meet cereal, not feed, requirements. In the past five years (1984–89), corn imports averaged 560,000 tons and a good portion of this corn probably was used for feed (about 1 percent of the estimated quantity of corn fed to livestock in those years). Given the constraints on foreign exchange and the government's desire to accelerate industrial production through imports of key industrial equipment and technology, it is unlikely that authorities will allow large quantities of foreign exchange to be used to purchase corn. Corn in this context can be considered a luxury item like tobacco, alcohol, and color TV sets—items consumers want but which authorities deem unaffordable at this stage in China's development.

GRAINS VS. MEAT IN THE "REFORM" SCENARIO

The "reform" scenario assumes increased use of markets, specialization, and comparative advantage. But government authorities will continue to play a major role in the economy, especially in managing foreign trade.

For institutions handling grain in the next decade, "price" will be a more severe taskmaster than government cadres. Grain handlers will be disciplined by price and profit margins to initiate waste reducing measures. These measures could make several million tons of grain available each year.

Price will also discipline cereal consumers to save grain. Per capita cereal consumption is expected to decrease in the coming decade both because of grain- saving strategies and because consumers will get more of their calories from processed foods, vegetables, fruits, beans and meat.

Industrial use of grain likely will increase. As the economy expands, an increasing portion of the grain crop will be used for industrial purposes. For example, starch and sugar production using grain likely will increase. Grain used to manufacture alcoholic beverages probably will increase, but the expansion will be disciplined by price, rises in income, and limited by foreign exchange in the case of barley to brew beer.

How much grain will the market allocate to meet the demand for livestock products? Population growth, expansion of incomes, and reduced government constraints will encourage meat consumption. On the other hand, given falling cultivated land area, decreasing area sown to grain crops, slowly rising grain yields, and government policy preference to maintain basic food cereal rations, feed grain output might not match the demand for meat.

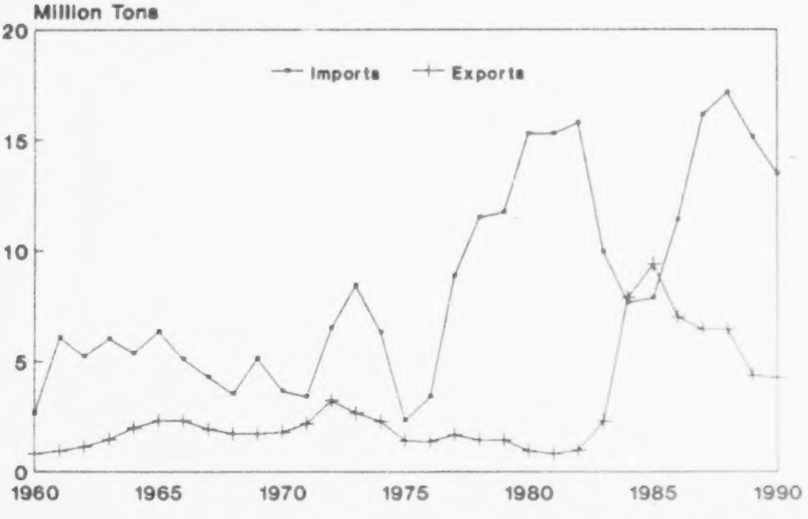
How consumers will respond in markets to purchase cereals and meats cannot be foreseen clearly. The published target of 27.8 to 30 million tons of meat by 2000 implies feed grain requirements of 182 million tons compared with 132 million tons for feed in the "no change" scenario, a gap of 50 million tons. Our best guess is that this gap will be adjusted in three ways. First, a rise in price for feed grains certainly would induce more feed grain production.

Second, some feed grains will be imported. For reasons already given, the government likely will limit the foreign exchange allocated to purchase feed grains on the international market. More feed grains will be imported than under the "no change" scenario, but, on the whole massive quantities of feed grain probably will not be imported. For example, the governments of Japan and South Korea have managed meat production, and meat and feed grain imports, so that per capita consumption in 1989 was 34.7 kilos and 27.4 respectively. Third, higher meat prices will prompt consumers to purchase less meat until there is a balance between supply and demand.

VII. How Much Grain for Export and Import?

China's exports expanded from $1 billion in 1953 to 7.6 billion in 1977, an average annual rate of increase of 8.7 percent. After 1978, a liberal open door trade policy encouraged exports, which reached $59.1 billion in 1989—an average rate of increase of 18.7 percent. China's imports followed a similar pattern with growth rates slightly smaller than exports. China has been both an exporter and an importer of grain in the past four decades, but for most years has been a net importer (Figure 8).

Figure 8
China's Grain Trade, 1960-90



INTERNATIONAL GRAIN TRADE IN THE "NO CHANGE" SCENARIO

In the "no change" scenario, China's exports are assumed to expand from a three-year (1987-89) average of $48.7 billion to over $92.4 billion by 2000, an average growth rate of 6 percent a year. Government authorities likely will attempt to constrain import growth, which is expected to grow from a three-year average (1987-89) of $50.3 billion to 77.4 billion in 2000, an average growth rate of

4 percent a year. Considerable foreign exchange reserves will be generated in the 1990s.

In the coming decade, China's grain exports should decline because of increasing domestic demand for cereals and feed. Small quantities of rice, corn, and sorghum will be exported. Grain imports are forecast to expand from 15.1 million tons in 1989 to 22.9 by 2000. Government authorities in the 1980s allocated 3 to 5 percent of their import bill to purchase grains. Growth in exports should provide sufficient foreign exchange to finance these purchases. Government authorities will continue to emphasize grain self-sufficiency and will import grain to maintain the urban grain ration system. Government authorities probably will import sizeable quantities of wheat and small quantities of feed grains to support livestock feeding operations in suburban areas.

INTERNATIONAL GRAIN TRADE IN THE "REFORM" SCENARIO

In the "reform" scenario, China's exports are assumed to expand from a three year (1987-89) average of $48.7 billion to over $102 billion by 2000 at an average growth rate of 7 percent a year. Government authorities likely will have less control over imports than in the "no change" scenario and import growth is expected to expand from a three year average (1987-89) of $50.3 billion to $105 billion in 2000, also an average growth rate of 7 percent a year.

Under reform conditions, China's grain exports will rise, with certain regions exporting rice, sorghum, potatoes, and corn. Other regions will import large quantities of wheat, and small quantities of rice, soybeans and corn. If China's citizens follow the path of Taiwan, whose citizens consumed an average of nearly 58 kilos of meat in 1989, and if government authorities allow foreign exchange to be used to purchase feed grains, then it is possible that large quantities of corn will also be imported.

LOSS AND MISUSE OF CHINA'S CULTIVATED LAND

By Leo A. Orleans [*]

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SUMMARY

When, earlier in this century, parents admonished children to finish everything on their dinner plates because Chinese people were starving, the cliche simply reflected the prevalent and well-founded truism, overstated rather emotionally in 1948 by ecologist William Vogt: "China quite literally cannot feed more people. . . . The greatest tragedy that China could suffer, at the present time, would be a reduction in her death rate. . . . Millions are going to die. . . . There is no way out. These men and women, boys and girls, must starve as tragic sacrifices on the twin altars of uncontrolled human reproduction and uncontrolled abuse of the land's resources." [1]

Now, of course, few people consider China to be on the verge of a Malthusian disaster. Aside from the major famine which followed the Great Leap Forward and scattered regional food shortages, China has managed not only to feed a population which doubled in the past 40 years, but actually to increase per capita grain production.[2] Even more impressive, she is feeding over 20 percent of the world's population on probably less than 5 percent of the world's arable land.[3] The fact that China's per capita grain production has

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[*] Leo A. Orleans is a China consultant, Congressional Research Service, and publications coordinator for these volumes.

[1] William Vogt, *Road to Survival* (New York: William Sloane Associates, Inc., 1948) pp. 224-5. Brought to my attention in Frances Moore Lappe and Joseph Collins, *Food First* (Boston: Houghton Mifflin, 1975) p. 97.

[2] In 1952 every person received 570 jin (2 jin = 1 kg) of grain; in 1981 the person share rose to 652 jin. (*China Daily* (hereafter CD), Feb. 1, 1983, p. 1).

[3] Chinese sources cite various figures for China's proportion of the world's arable land. Perhaps two extreme examples are 2 percent (*Jingji Ribao*, Jan. 10, 1989; FBIS-CHI-89-022, Feb. 3, 1989, p. 51) and 6.8 percent (Taiyuan Shanxi Provincial Service, Oct. 8, 1988; FBIS-CHI-88-197,Oct. 12, 1988,p. 42.) Some of the differences may be the result of confusion between arable or

Continued

increased despite the rapid population growth can be attributed to two factors. First, advances in science and technology have made it possible for China to increase the sown area by intercropping and planting two or more crops on the same piece of land during one cropping year. As a result, while cultivated land has been decreasing, the sown area has increased from 141.3 million hectares in 1952 to 144 million in 1990.[4] And second, the credit must also go to the resourceful and hard-working Chinese peasants, who, in the course of these decades, managed to overcome fluctuating and often irrational goals and policies. Or, as someone else put it, "Rather than geographic determination of human fate, China illustrates human determination of geographic fate. . . . The Chinese were, and are, adept at making the land serve their ends rather than allowing it to constrain them. . . ." [5]

China's agricultural performance, however, is covered elsewhere in this volume. (See chapter by Webb and Tuan and other chapters in this section) Here the discussion will center on China's loss of cultivated land, which is having a serious effect on agricultural production and is becoming more acute each year. As we shall see, the land crisis relates to the growth of urban areas, the expansion of rural industries, the explosion in new rural housing, inadequate and poorly implemented laws, the general mismanagement of land, as well as a variety of environmental factors.

I. Amount of Cultivated Land and Its Rate of Loss

China has some of the oldest statistics on cultivated land of any country, but they suffer from a variety of problems: the use of measuring units which changed not only over time but also regionally; the often-difficult mathematical problem of measuring irregular pieces of land; and serious underreporting because land was generally used to determine the local tax base.

Over the past decade China has made great improvements in the quality of her statistics, but even now they should not be taken at face value or used without caveats and explanations.[6] Although numerical precision is not necessary to appreciate the magnitude of the farmland disappearance problem, a few words on the nature of the pertinent statistics are still in order.

Given the variety of land figures reported in contemporary Chinese sources, it is clear that many of the difficulties of measuring, aggregating, and reporting these statistics are legitimate. As with other statistics, however, there continues to be a traditional "*chabuduo*" ("more or less") attitude toward them. To make matters worse, casual users of land statistics (both Chinese and foreign) often use figures for cultivated land and sown land (includes land which is double and triple cropped) interchangeably, creating con-

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tillable land, cultivated land (land plowed up each year), and sown area, which may include two or more crops on the same piece of land during one cropping year (discussed below).

[4] Frederick W. Crook, "Allocation of Crop Sown Area: Analysis of Trends and Outlook for the Future," *China Agriculture and Trade Report*, U.S. Department of Agriculture, July 1990, p. 37.

[5] E. N. Anderson, *The Food of China* (New Haven, Conn.: Yale University Press, 1988) as cited in Jerome B. Brieder, "Millions of Mouths to Feed," *Natural History*, Oct. 1988, p.36.

[6] See Michael Field's chapter in this volume. Also, see L. A. Orleans, "China's Statistics: The Impossible Dream," *American Statistician*, May 1974. Many of the problems and attitudes I discuss in this early article are still valid today.

siderable confusion. Translations are notorious in reporting what is obviously "sown land" as "cultivated land" or "arable land." Conversion of units between mou, hectares, acres, and, on occasion, square kilometer, adds to the difficulty of finding matching figures. But the conclusion is not as bleak as this confusion might suggest. More recent figures reported by the Ministry of Agriculture and the State Land Administration Bureau have become quite consistent—albeit still often distorted in secondary sources.

Table 1 presents rounded, order-of-magnitude figures on cultivated land for selected years and shows the growth in the number of people each hectare of farmland must support. (Perkins' hard-gained but illusive figures for the early years, when China was expanding her borders, are included mostly as a curiosity.) It is important to understand that since 1949 the annual changes are net figures: the difference between land lost due to natural factors (deforestation, erosion, salinization, etc.) plus the expansion of urban and rural settlements, less the land gained as a result of China's land reclamation program. The new lands programs were especially successful in the 1950s when millions of people were conscripted to reclaim wasteland, level and terrace mountain sides, transform deserts through the construction of irrigation and drainage systems, and, in every way possible, increase land that could be cultivated, including lands that were neglected during the war period. In this way, China's cultivated land acreage managed to keep pace with population growth throughout most of the 1950s.

Table 1 shows that the land loss problem became more serious in the 1960s; in the 1970s the number of persons per hectare increased primarily because of population growth rather than loss of land, although the 100 million hectares of cultivated land reported between 1973 and 1982 are more likely to reflect an absence of statistics, rather than stability; in the 1980s, with the introduction of the responsibility system and other economic reforms (discussed below), the land problem reached crisis proportions.

Indeed, by 1986 there were twice as many persons in China per hectare of cultivated land as there were in the early 1950s. Or, to put it another way, "In 35 years, per capita cultivated land decreased by about 50 percent; between 1957 and 1977 the decrease in cultivated land amounted to the total cultivated land of 11 provinces, including Guangdong, Gwanxi, Yunnan, and Szechwan." [7] On the whole, despite some of the usual inconsistencies, statistics on cultivated land and its loss have become plentiful and are probably reasonably accurate.

II. CAUSES OF LAND LOSS

The many factors which are responsible for misuse, abuse, and consequent loss of arable land in China can be divided into three broad categories: the first relates to development and modernization, the second to rural reforms and changing attitudes toward land, and the third to the environment. And, as will be seen, perhaps the basic stumbling block to coping with the loss of land are the ubiquitous and self-serving work units (both urban and rural),

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[7] *Liaowang*, No. 29, July 20, 1987; JPRS-CAR-87-046, Sept. 10, 1987.

TABLE 1. Approximate Figures of Cultivated Land and Population, Selected Years

(Land and population figures rounded to nearest million)

Year	Cultivated Land (million hectares)	Midyear Population (millions)	Persons/hectare
1400	25	61	2.4
1600	33		
1685	49		
1766	63	215	3.4
1873	81	349	4.3
1893	83	387	4.7
1913	91	430	4.7
1933	98	503	5.1
1949	98	560	5.7
1950	100	563	5.6
1951	104	568	5.5
1952	108	575	5.8
1953	109	584	5.4
1954	109	595	5.5
1955	110	607	5.5
1956	112	619	5.5
1957	112	633	5.7
1958	108	647	6.5
1965	104	716	6.9
1970	101	820	8.1
1973	100	883	8.8
1975	100	918	9.2
1979	100	972	9.7
1981	100	995	10.0
1982	100	1,008	10.1
1984	98	1,032	10.5
1985	97	1,043	10.8
1986	96	1,056	11.0
1988	93	1,087	11.7

Sources: Cultivated land—1949–79: As provided by the Ministry of Agriculture to the World Bank and reported in a document entitled *China: Socialist Economic Development*, Annex C: Agricultural Development, June 1, 1981, p. 61. 1984 and 1985, as derived from information in China Daily, Feb. 21, 1987, p. 3; 1986: *Renmin Ribao*, May 18, 1987; JPRS–CAR–87–013, July 1, 1987, p. 85. 1988: *China Daily*, Oct. 21, 1988, p. 1. Population—1949–1981: Judith Banister, *China's Changing Population* (Stanford University Press: Stanford, CA, 1987), p. 352. Post 1982: Mid-year estimates of the U.S. Bureau of the Census, provided by Banister.

Note: The pre-1949 approximations are included primarily as a curiosity. They are taken from Appendix A ("Chinese Population Data," pp. 207 and 212) and Appendix B ("Cultivated Acreage Data," p. 240) in Dwight H. Perkins, *Agricultural Development in China 1368–1968* (Chicago: Aldine Publishing, 1969).

and especially their leaders, who have had long experience in circumventing state policies for personal gain.

A. DEVELOPMENT AND MODERNIZATION

Urban Growth. National development and urban sprawl have always gone hand in hand. China's 1953 census reported an urban population of only 77.2 million or 13.2 percent of the total population; the 1982 census reported an urban population of 206.6 million or 20.6 percent; and in the next seven years (to the end of 1989) it was reported to be 315.7 million, or 28.6 percent of the total.[8] The fourfold increase in urban population resulted in an even greater increase in the urban area, from 2 percent (at some unspecified date, most likely 1949) to 9.1 percent of China's area in 1986.[9] Despite the inclusion of large rural tracts within the urban boundaries, this figure seems grossly exaggerated. Nevertheless, to accommodate the millions of new urban immigrants each year, there is no doubt that large areas of arable land have been lost to agriculture through the construction of factories, housing, roads, parks, communication, and other facilities.

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[8] *Xinhua*, May 5, 1990; FBIS–CHI–90–088, May 7, 1990, p. 37. For a more detailed discussion of urban population, other estimates, and definitional problems, see chapter by Judith Banister in this volume.

In terms of arable land loss, perhaps even worse than the expansion of large municipalities has been the rapid growth in the number and size of small and medium-sized towns scattered throughout the country. While trying to control the growth of large municipalities, the government has pushed the development of smaller urban areas, which could use local resources and absorb some of the excess rural labor. As a rule, these settlements start out as agriculture-based market towns on some of China's most fertile soils.

Millions of peasants have indeed been leaving the back-breaking activities of agriculture and going to work in nearby urban areas. In fact, nonfarm activities became a lucrative novelty even while communes were still intact and there were reports that, even then, under the rubric of "developing integrated operations by combining agriculture, industry, and commerce," local cadres would take fertile land out of agriculture and rent or sell it to operators of small factories.[10]

In a land-short society there is also a tendency to hoard land. Urban enterprises and institutions frequently manage to acquire more land than they can use and, because land was allocated by the state and is free, they consider it to be "their own property and let it lie idle for possible future use, thus aggravating the urban land shortage." [11]

Even in 1987 the statement by the director of the Rural Development and Research Center that "China plans to shift 100 million people from agricultural work to local industries in the next few years," [12] seemed grossly exaggerated. Now that China has initiated an austerity program to cut down on excessive capital construction and fixed assets, reduce inflation, and improve the economic environment, there has been a reverse movement and millions of peasants have been forced to return to the farms. It is safe to say, however, that the slowdown in urban growth is temporary and that the loss of cultivated land due to urban expansion is bound to continue for a long time.

Rural Development. Nothing reflects more clearly rural China's prosperity in the 1980s than the boom in the construction of rural housing, a phenomenon frequently commented on by visitors to China. According to *Guangming Daily*, between 1979 and 1988, 6.2 billion square meters of housing were built in rural China; 86 million rural families moved into new houses; the average per capita living space in rural areas was expanded from 10 to 19.4 square meters—at least triple the average in urban areas; and 672 million square meters of rural public facilities were constructed.[13] This is, of course, great for the peasants, 80 percent of whom are said to live in attractive new brick homes, but what effect has this had on land loss? The director-general of the State Land Administration complained that between 1985 and 1988 more than 227,000 hectares of farmland were used by farmers for private housing sites.[14] This is a tremendous amount of land, but considering the fact that many farmers are accused of building "villa-style apartment buildings," (at least from the exterior) it may not be an exaggeration.

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[9] CD July 8, 1987, p. 1.
[10] *Red Flag*, No 20, Oct. 16, 1981; JPRS No. 79, 712, Dec. 22, 1981.
[11] *Red Flag*, No. 16, Aug. 16, 1986.
[12] CD, Sept. 4, 1987, p. 1.

As did the cities, the Chinese countryside saw the proliferation of small-scale industries and other nonagricultural enterprises, often making it difficult to draw lines between city and countryside. The problem, however, is the same. Whether through the expansion of towns or villages, land that was previously used for agriculture is now being used for other purposes. Large tracts of valuable farmland around the country have been occupied by rural enterprises—of which the most land-hungry, apparently, are brick and tile kilns with their yards. One good indication of the extent of nonagricultural activities in the Chinese countryside is that by 1988, 95 million Chinese farmers, or one-quarter of the nation's rural labor force, were involved in township enterprises, whose total output value (regardless of quality) topped 640 billion yuan, surpassing that of agriculture.[15] Such a boom in township enterprises must inevitably consume large chunks of farmland, but the process may be halted at least temporarily. It was reported that as part of the current retrenchment process, China has closed or transferred 3 million rural enterprises, eliminating 3 million jobs[16]—which tells us something about the size of the country, the nature of rural enterprises, and some interesting aspects of Chinese statistics!

As in the cities, there is also hoarding of land in the countryside. Some farmers become involved in sideline production and other nonagricultural work and as a result many either neglect their land or do not cultivate it regularly, but refuse to give it up for others to cultivate. The official explanation for this "hoarding" mentions "the legacy of feudalism," insecurity of income from industrial jobs and sideline production and, most important, that there is no penalty for taking fertile land out of production.[17] From the peasants' perspective, holding on to their small strip of contract land makes great sense. Because of the insecurity of urban and township employment, the main function of "this stretch of land which the peasants neither cultivate well nor wish to abandon" becomes an "indispensable safety net for social stability." [18] To put it simply, if the peasants lose their jobs in towns or in townships, as many do, they can always return to their land.

Finally, there is considerable concern over the loss of arable land that remains in agriculture (produces food) but is no longer cultivated. The introduction of a market economy into the countryside has caused many farmers to convert their land from grain production into more lucrative uses, such as fishing ponds, poultry farms, and orchards.

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[13] *Xinhua*, Sept. 22, 1989; FBIS-CHI-89-192, Oct. 5, 1989.
[14] CD, Jan. 18, 1990, p. 1.
[15] *Beijing Review* (hereafter BR), April 30–May 6, 1990, p. 21.
[16] *Xinhua*, April 9, 1990; FBIS-CHI-90-072-S, April 13, 1990, p. 43.
[17] CD, Oct. 19, 1988, p. 4.
[18] *Jingji Ribao*, April 14, 1990; FBIS-CHI-90-091, May 10, 1990, p. 30.

B. REFORMS, AMBIGUOUS OWNERSHIP AND CHANGING ATTITUDES TOWARD LAND

In addition to the "normal" losses of cultivated land due to urbanization and the expansion of nonagricultural rural activities, it is important to note the changing attitude of Chinese farmers toward land—a change caused, to a large extent, by introduction of the responsibility system and which has resulted in some new and unanticipated problems. The controversial Chinese television series, "River Elegy," ascribes much of China's backwardness and resulting ills to the narrowness and conservatism of the Chinese people and to their stubborn worship of land. If this were in fact true, Deng's reforms seem to have altered this "fixation on the land." Because of the emergence of changing conditions and new incentives, all too many Chinese peasants are willing to abandon their land.

In this connection, the most glaring problem spawned by the demise of communes and introduction of the responsibility system is the fuzziness of land ownership and use rights. There is a great deal of uncertainty about the demarcation between collective ownership and land use rights of farming households and about the length of time a family will be able to farm a specific piece of land. While in theory land is assigned for 15 years, in many localities it is reassigned every few years. Conflict over land allocation has become common. In one county 90 percent of civil disputes had to do with lack of distinction of land ownership.[19] One scholar from the Agricultural Development Research Institute adds: "Since communes have died out no one actually owns the land," so that "people in rural areas with power, influence and money find it easy to use land to obtain gains." [20]

It is easy to see how this land allocation system not only increases the chance that land will be misused but limits optimum investment by individual families and thereby adversely affects the yield. At the household level, ambiguous property rights have, at best, caused peasants to operate their land for short-term gains and, at worst, to lose their enthusiasm for farming and, in many cases, to leave farming altogether. Many farmers are spending their increased income on food, clothing, and houses, ignoring investment in the land. At the institutional level, since enterprises and units occupy land at no cost, there is no incentive to use land efficiently, resulting in "rampant construction projects and cheap uncontrolled land allocation" and the shrinkage of farmland.[21]

Concern over loose ownership standards have given rise to frequent scholarly meetings and seminars to discuss various types of land ownership schemes.[22] But although, at least so far, there have been no practical solutions to this problem, a few localities are experimenting with land registration certificates for both units and individuals, which specify definite land boundaries and proof of compensation for the transfer of land use rights.[23]

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[19] *Liaowang* Overseas Edition, Dec. 19, 1988; FBIS-251, Dec. 30, 1988, p. 43.

[20] *Xhongguo Nongcun Jingji* (*Chinese Rural Economy*), No. 5, May 31, 1989; JPRS-CAR-89-095, Sept. 13, 1989, p. 37.

[21] CD, Jan. 30, 1989, p. 2.

[22] See, for example, *Qiushi* (*Seeking Truth*), No. 12, Dec. 16, 1988; JPRS-CAR-89-031.

C. ENVIRONMENTAL FACTORS IN LAND LOSS

The history of Chinese civilization is intimately tied with land and with an unending battle against environmental factors. Here I will limit the discussion to a brief review as it relates to the loss of cultivated land.

Although China is spending more of her limited funds on programs designed to protect farmlands from "natural" causes, the magnitude of the problem is increasing. According to the *People's Daily* every year 133,000 hectares of land is washed away by flood, turned into desert, or destroyed by other natural disasters.[24] Deforestation is probably the primary reason that millions of tons of soil are washed into the sea every year. Along with quarrying and mining, the cutting of forests causes silting, which, in turn, raises the level of river beds, making floods more frequent, transportation more erratic, and seriously damaging existing farmland. At the same time, and despite efforts at control, China's deserts are growing at a rate of 1,560 square kilometers a year, according to the director of a desert control institute.[25]

To manage these problems China has been carrying on a seemingly endless program of afforestation, reporting both significant achievements and major failures. The Green Great Wall shelterbelt extending across North China—which includes the planting of grasses and bushes, as well as trees—is a good example of this. On the one hand it is reported that this 10-year effort freed 10 million hectares of farmland from sand storms and, in the process, helped water conservation and controlled soil erosion; on the other hand, mismanagement of this expensive project and a lack of funding to compensate the peasants who provide seedlings for trees and do the planting, have caused serious difficulties and almost half of the new forest suffers from insect damage.[26] Similar problems are reported from around the country and all result in extremely low survival rates for newly planted trees. Planting goes on, however, and the Minister of Forestry provides us with figures that seem incredible even for China: in a 1989 nationwide afforestation drive, 300 million people planted a record 1.7 billion trees (fewer than 6 trees per person) on 5.4 million hectares of land.[27]

Other causes for the deteriorating ecological environment and consequent loss of farmland are an increase in salinization; an increase in sandy soils due to denudation, improper reclamation, and excessive grazing of animals; soil erosion, especially in South China's hilly areas; and pollution of fields, especially by foul water.[28] According to the latest figures, 6.7 million hectares of farmland are contaminated by waste water, petroleum products, and cinder, reducing the annual grain harvest by 10 billion kilograms.[29] Additional pollution was caused by the introduction of pesticides and chemical fertilizers into Chinese agriculture so that, according to the *Farmers Daily*, 13 million hectares of the country's farmland are polluted by these chemicals.[30]

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[23] Xinhua, Jan. 6, 1988.

[24] CD, Aug. 10, 1989, p. 4.

[25] BR, Mar. 14-20, 1988, p. 12.

[26] CD, Oct. 4, 1988, p. 1.

[27] Xinhua, March 5, 1990; FBIS-CHI-90-044, March 6, 1990.

[28] See, for example, Hefei, *Anhui Ribao*, June 22, 1985; JPRS-CAG-85-027, Sept. 12, 1985, p. 4.

As farmland is lost and degraded, China is in the constant process of adding land through the reclamation of wastelands. In 1986 alone some 250,000 hectares of land were "reclaimed and newly created." [31] Current land reclamation plans appear not only too ambitious, but perhaps not altogether realistic. For example, the National Committee on Agricultural Zone Planning estimates that more than 6.6 million hectares of wasteland in "remote and seashore areas" will be reclaimed before the turn of the century. It also projects that nearly 10 million hectares of seashore or beach areas can be turned into farmland capable of feeding more than 100 million people! [32] Past experience proves that unfettered land reclamation for agriculture can seriously damage the land without adding any significant production. Most frequently this happens during periodic drives to grow more grain, when the performance of the cadres is judged by the acreage added to cultivated land rather than its productivity. Frequently grain was planted on marginal reclaimed land—often valuable grassland—only to be abandoned after a few years to experience even more severe erosion.[33] In the 1990s the Chinese authorities have become much more aware of the need to protect the regressing grasslands,[34] but there is certainly no guarantee that the next drive to expand grain acreage (which is sure to come) will not commandeer the most readily accessible grasslands.

Whatever China's success in opening up new lands, three points must be kept in mind. First, despite land reclamation, the amount of arable land has decreased every year since 1957.[35] Second, most of the lost farmland is in the most fertile, densely populated areas of China, while the reclaimed land is of much lower fertility and tends to be located in remote areas where transport facilities are poor. It is not an equal exchange. And third, a significant proportion of cultivated land lost to environmental factors results from massive efforts to add land through reclamation. As already discussed, the liberal felling of forests and destruction of grassland in order to create farmland in some areas ("blind reclamation of land") has cost China millions of hectares of farmland through soil erosion, floods, and shifting sands in other areas.[36]

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[29] Xinhua, March 30, 1990; JPRS-CAR-90-030, April 24, 1990, p. 57. "Waste water is responsible for almost half of all farmland pollution." (*Anhui Ribao*, June 22, 1985; JPRS-CAG-85-027, Sept. 12, 1985, p. 7.)

[30] CD, Nov. 5, 1988, p. 4.

[31] *Renmin Ribao* (*People's Daily*) (hereafter RMRB), July 24, 1989; FBIS-CHI-89-151, Aug. 8, 1989, p. 46.

[32] CD, March 23, 1988, p. 1.

[33] See, for example, "Status of Grasslands in China," an unpublished paper by Yang Li and Hsin-i Wu presented at a CSCPRC Grasslands Meeting in Washington, D.C., May 30, 1990.

[34] In this connection, it is interesting that a 1989 circular demanding that local governments open up new farmland was jointly issued by the State Land Administration Bureau, the State Science and Technology Commission, the Ministry of Finance, and the Ministry of Agriculture. (*Jiefangjun Bao*, Oct. 25, 1989; FBIS-CHI-89-215, Nov. 8, 1989.)

[35] For example, "Looking at conditions over the past 20 years (approximately 1960 to 1980), each year an average of 16 million *mu* of wasteland was reclaimed whereas 25 million *mu* of land was occupied for other uses." (*Jingji Guanli*, No. 7, July 15, 1980; JPRS No. 76, 462, Sept. 22, 1980, p. 8. Also see Table 1.)

III. LEGAL RESPONSES AND PROBLEMS OF IMPLEMENTATION

Between 1949 and 1979, almost all the concern over the loss of arable land was limited to the negative effects of pollution on land. Not unlike other third world countries, economic progress was deemed much too important to be sidetracked by concern about how land was used. For over 30 years it was almost inconceivable for anyone to object to the use of farmland to construct a factory, with adjacent workers' housing and other amenities. There were, of course, complaints even in the late 1970s and early 1980s about "anarchy" in land use, pointing, for example, at commune cooperatives, tractor stations, and brick workshops occupying much more land than they needed,[37] but public outcry was muted because under the commune system land was collectively owned. There was always opportunity to misuse the land, but the possibility of personal gain through some form of land manipulation was, for all practical purposes, impossible until decollectivization and the greatly increased opportunities for profit by individuals.

With the introduction of the responsibility system and the subsequent confusion about the control and management of land, the people in the countryside found new and previously nonexistent opportunities to make money from land. The peasants profited from the new market economy in agriculture and by developing sideline enterprises, but the primary profiteers and culprits in the misuse of land were the local officials who, with every passing year, seemed to exhibit more and more disregard for rules and regulations on land use. In 1987 an investigation by the State Land Administration showed that 40 percent of the land was seized unlawfully and that in some localities the illegal use of arable land reached 60 percent.[38] The custom of taking land first and seeking approval later—whether by individuals or enterprises—was widespread, as was the practice of taking much more land than was approved by the authorities.[39]

Despite widespread corruption, it was not until June 1986 that the Standing Committee of the National People's Congress passed what the Chinese refer to as the first land management law.[40] It was to become effective in January 1987 and was designed to prevent the confiscation of land for industrial use and construction and to protect it from a variety of other abuses by using administrative, economic, and legal means to strengthen land management.[41] This law was supplemented by the "Regulations on Land

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[36] See, for example, RMRB, July 24, 1989; FBIS-CHI-89-151; Aug. 8, 1989.

[37] RMRB, June 22, 1980; JPRS 76,574, Oct. 9, 1980, p. 20.

[38] *Liaowang*, July 20, 1987; JPRS-CAR-87-046; Sept.10, 1987, p. 35.

[39] See, for example, *Jingji Wenti* (*Problems in Economics*) No. 6, June 25, 1985; JPRS-CEA-86-050, April 29, 1986, p. 38.

[40] A copy of the 57 articles of the law was released by *Xinhua* on June 25, 1986 and translated in JPRS-CAG-86-029, Aug. 1, 1986, p. 1.

[41] Only joint ventures, cooperative enterprises, and enterprises with exclusive foreign investment could get preferential treatment in the use of land. (Hong Kong, *Zhongguo Xinwen She*, Dec. 9, 1986; FBIS, Dec. 15, 1986, p. K15). For more information on the foreign land-use policy, see Perry Keller, "Liberating the Land," *The China Business Review*, March-April 1988, pp. 40-44.

Rehabilitation" which were announced by Premier Li Peng in November 1988 and which were to go into effect on January 1, 1989. The lengthy regulations can be boiled down to this: whoever (whether enterprises or individuals) is responsible for damaging land in any way will be responsible for rehabilitating it.[42] The whole concept of restoring land damaged by mining, timber cutting, or solid-waste pollution is brand new to the Chinese and in order to encourage units to use "re-improved" land for agriculture, animal husbandry, fish breeding, or tree planting, they were exempt from the agricultural tax.[43]

Statistics on the "wanton occupation" of arable land are both plentiful and contradictory, but they make clear that the immediate effect of the law on land-related corruption was negligible.[44] As already alluded to, the most obvious obstacle to the law's implementation was that the implementers themselves were not only the ones most likely to profit from ignoring it, but, as pointed out by one Chinese commentator, they were "not even able to accept the fact that the violation of the Land Law was a crime." Local party and government officials who are in control of the land—i.e., in a position to sell, lease, or approve its use—were responsible for more than half the illegal land transactions. The *People's Daily* put it more vividly by saying that the difficulty of checking the abuse of farmland stems from the fact that "the pen which determines the fate of the land has not been really brought under control." [45]

Just three of the endless examples of how cadres profit from land—which theoretically has no value and cannot be traded under Marxism—should adequately illustrate the problem.

An article in the *People's Daily* tells a story of a government department in Jinan City which, in order to build cemeteries, took over 13 hectares of farmland on which 400 villagers made a living. Officials then auctioned off the cemetery plots, "pocketing with smiles" the 1,500 to 2,400 yuan each plot brought. The article goes on to say that since only 27 percent of the country's 6 million deaths last year were cremated, it is clear that "the dead are competing and will continue to compete with the living for the country's limited land." [46]

Another interesting tale comes from Hebei Province. After getting approval from the village committee, a party secretary had a brick kiln built which, with its field, occupied 3.2 hectares of farmland. He neglected, however, to get the necessary approval of higher authorities. The farmers complained; the county investigated; the party secretary admitted his fault, but the kiln continued to operate. Now the farmers have taken the case to provincial authorities and vow, if necessary, to take it to the central government.[47] But while more and more peasants apparently sought justice from the courts, local authorities gained reassurance from the fact that noncompliance with the law did not result in severe criminal sanctions for the offenders, but only fines or possible dismissal from the job—a relatively small price to pay when 1 hectare of land could bring from 28,000 to 72,000 yuan.[48]

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[42] *Xinhua*, Nov. 13, 1988; JPRS-CAR-89-003, Jan. 3, 1989.

[43] CD, Nov. 16, 1988, p. 3.

[44] For example, one report states that even though in 1987 the illegal occupancy of farmland showed a decrease over the previous year, the country still lost about 800,000 hectares of farmland in this way (CD, March 3, 1989, p. 3). Incomplete statistics for 1988 (from just 24 provinces) showed 387,000 cases of illegal building on cultivated land, implying a decrease (*Xinhua*, Oct. 26, 1989; FBIS-CHI-89-206, Oct. 26, 1989, p. 52), while another *Xinhua* report states that the number of violations of the land law increased in 1988 (*Xinhua*, Nov. 5,1988; FBIS-CHI-88-219, Nov. 14, 1988).

[45] RMRB, Feb. 5, 1990; FBIS-CHI-90-037-S, Feb. 23, 1990.

[46] CD, 12-29-88, p. 4. Another article in the *China Daily*, entitled "Burials Gnaw Away Arable Land," included detailed figures on the area occupied by burial mounds, the amount of timber used in each coffin, and savings in arable land and timber that accrue when bodies are cremated. (CD, Dec. 1,988, p. 4).

There are also apparently instances when the cadres are willing to share their booty with the peasants. Some villages on the outskirts of cities sell off their (common use?) land "to government agencies or enterprises," invest or deposit the proceeds in banks, and distribute the interest to all the peasants, "who are thus living very well." And they well might if, as reported for the outskirts of Chengdu in Sichuan province, land is going at 750,000 yuan per hectare! [49] By the end of 1989, Beijing realized that something more drastic had to be done to strengthen the 1986 land law. Wang Xianjin, Director-General of the State Land Administration, listed the measures intended to reinforce its implementation. He pledged not only to reduce the construction targets and tighten up on land-use approvals given by authorities, but even to take back land-use rights from projects that were halted or cancelled by the current austerity drive. Because of the newly established quotas on the amount of land that can be taken out of agriculture each year, large land users such as coal and nonferrous metals producers, airports, railways, highways, irrigation networks, and oil fields will have to apply to the State Land Administration for special permission to build new projects.[50] The building of private houses in rural areas is also to be restricted and there is to be a 20-year freeze on the expansion of existing private housing sites. Cadres desiring to build private homes will have to get two types of approval, first from local officials and then from the State Land Administration. And most important, those who do not abide by the regulations set down in the land law and acquire land either for themselves or for their relatives will be severely punished "no matter who they are." [51] As part of these regulations, Wang also set a goal for the amount of land that will be reclaimed in 1990, showing a net increase in farmland of 1 million *mu* or about 67,000 hectares for the year.[52] So much for theory. Significantly, what he did not mention is the need to prolong land-contract tenure in order to give peasants an incentive to stay on the land and invest in it.

To have better control over producing farmland, the State Land Administration intends to bring most of it under State protection, especially the high-yield farming areas of east, central, and southeast China and in the coastal areas. Since 70 percent of the land is said to be managed by township-level governments, it is not quite clear how this consolidation will be accomplished. One important step, however, will be to reinforce the inadequate ranks of local land officials, 60 percent of whom perform their duties on a part-time basis. Another innovation, at least in some "experimental areas," is for farmers to sign agreements "not to build houses, make bricks, grow fruit trees, or dig fish ponds on protected farmlands" and in return the government promises not to allow the confiscation of their land for use by developers.[53]

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[47] CD, March 3, 1989, p. 3.

[48] CD, Mar. 23, 1989, p. 1. For a more detailed account of the land- and housing-generated tensions between peasants and cadres, see David Zweig, "Struggling Over Land in China: Peasant Resistance after Collectivization, 1966–86," in Forrest D. Colburn, ed., *Everyday Forms of Peasant Resistance* (Armonk, N.Y.: M.E. Sharpe, 1989), pp. 162–8.

[49] *Jingji Cankao* (*Economic Information*), Feb. 13, 1989; JPRS–CAR–89–029, Apr. 4, p. 54.

[50] CD, Oct. 21, 1988, p. 1.

[51] CD, Aug. 19, 1989, p. 1.

[52] CD, Jan. 18, 1990, p. 1.

It is difficult to say how effective these new laws and regulations are likely to be in protecting arable land. Perhaps Li Peng's call for more efficient management of existing farmland in his report to the National People's Congress on March 20, 1990,[54] will show a degree of concern by China's top leaders which will assure better implementation. For the time being, however, the conclusion of heads of land bureaus at a March 1990 conference that "the tendency of sharp losses of arable land has been checked in recent years" [55] seems premature.

Finally, it is useful to place the land law into perspective and point out that the noncompliance with and nonenforcement of laws are not limited to land and are said to be "almost universal." A survey of law enforcement conducted in 1988 in Zhejiang Province showed that only 30 percent of the laws were enforced "fairly well," while 50 percent were "generally enforced" and 20 percent were "fairly poorly" enforced. And just as in the case of land laws, the primary culprits are the "leading cadres who hold power." [56]

IV. THE HEREAFTER

Political leaders can be replaced and the economy can be structurally corrected or "fine tuned," but China's population of over 1.1 billion will keep growing, and as long as China pursues a policy of modernization and development—and no one is predicting otherwise—farmland will continue to be taken for nonagricultural uses. Without raising the spectre of the moth-eaten Malthusian devil, it is easy to imagine an impending crisis and to understand Beijing's concerns. While the complex subject of China's food/population balance is beyond the scope of this paper, a few comments—superficial though they may be—are nevertheless most relevant to the subject at hand.

If population growth is taken as a given, then the answer seems all too simple: China must try to protect the existing arable lands and, at the same time, make them more productive. In other words, China must continue doing what she has been doing, but must do it more efficiently.

Observers from societies with a strong legal tradition find it difficult to understand why law enforcement is so capricious in China. In fact, traditional concepts are so deep-rooted in China that it will obviously take time to overcome what seems to be a perpetual tug-of-war between the rule by man and the rule by law. In the case of land, as in other cases, individuals, and especially cadres, will continue to seek and find ways to circumvent the existing rules and regulations. Consequently, although land laws are becoming more stringent and the rate at which arable land is taken for nonagricultural purposes is declining, the problems brought about by the loss and misuse of arable land will not disappear for many years.

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[53] CD, Dec. 12, 1989, p. 1. Quoting from RMRB.

[54] BR, Apr. 16–22, 1990, p. XIX.

[55] *Jingji Cankao*, Jan. 6, 1990; JPRS–CAR–90–018, Mar. 5, 1990, p. 54.

[56] Hong Kong, *Liaowang Overseas Edition*, No. 27, July 3, 1989; JPRS–CAR–89–103, Oct. 17, 1989, p. 51.

As to increasing the productivity of the cultivated acreage, here too China must approach the problem on two fronts: one systemic, the other scientific.

In the first instance, it is extremely important for China to create stability and confidence in the countryside by putting an end to the post-commune debate over whether land should be owned collectively, be privatized, or whether some middle ground should be sought. The decision is not an easy one and the best answer may have regional variations. The economic stimulation brought about through the introduction of the responsibility system into agriculture was impressive indeed, but in the future productivity may stagnate in many parts of China simply because household ownership of land has created serious problems of scale, which only increase as land acreage diminishes. Small plots in China may be manicured, but in many parts of the country they are also among the most fragmented in the world. Tillers of such postage stamp plots with ambiguous land rights may understand the advantages of technical improvements, but find it either impractical or impossible to invest in fixed assets, thereby continuing to rely on brawn to plow the land and to turn the soil. In the meantime, irrigation canals, rural roads, and other responsibilities previously taken care of at the commune level have suffered through neglect and lack of investment of both capital and manpower. The impracticalities of carrying out modernization and mechanization on small, scattered plots is well known, so that in areas where small-scale agricultural operations predominate, some type of community cooperatives, or dual management of land, is already under experimentation. On the other hand, the potential problems associated with the simultaneous existence of privately owned and cooperatively owned land are readily apparent.

In the second instance, China must obviously continue to increase the productivity of lands now under cultivation. It is, after all, through the introduction of new means and methods to improve traditional agricultural practices that she has managed to feed a population which has doubled since 1949. Granted that per acre productivity will likely increase much more slowly in the future, the agricultural know-how now practiced by advanced countries could still significantly raise current yields, especially if irrigated and double-cropped acreage is expanded. The availability of food could be further increased by decreasing the huge losses now experienced between field and market—a serious condition in all third world countries. For the short-term, then, and assuming political and economic stability in the country, increased mechanization and electrification, improved seeds, fertilizers and pesticides, and improved management at all stages, should make it possible for food production to keep pace with China's population.

Looking into the more distant future, indications are that scientific and technological potential in food production is almost beyond the imaginations of most lay persons. Although some critics contend that, if unrestricted, new developments in the biological sciences will bring about ecological disaster, there is little doubt that many of the promises held out by biotechnology (one of China's priority sciences), which may now read like science fiction, will come to fruition and thereby change farming around the world.

In China, nature and man have colluded to make the loss of cultivated land a serious problem. To overcome the potential crisis, Beijing will have to control nature, reorient man's values, and invest in science.

RURAL INDUSTRY: CONSTRAINING THE LEADING GROWTH SECTOR IN CHINA'S ECONOMY

By David Zweig *

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I. SUMMARY AND INTRODUCTION [1]

China's rural industry has been the most vibrant sector of the national economy since the mid-1980s. For several decades after they first emerged from the 1958 Great Leap Forward as a product of "self-reliant" development, rural factories were seen both in and outside of China as an anciliary part of China's economic development. They offered a means by which rural surplus labor could effectively use local resources. By the late 1960s, rural industry became a conduit for introducing urban technology to the rural areas. Yet it remained part of Mao's cellular approach to development and his goal of protecting the urban sector from the economic demands of the countryside. Rural, not urban, industry would supply finances and material for agricultural modernization, leaving urban, state-owned industry free to fulfill urban demands.

Since the mid-1980s, the increased interdependence of the urban and rural sectors has transformed the role and status of rural industry. Following the reintroduction of "household farming," and the freeing up of tens of millions of surplus rural laborers,[2] promoting rural industry and developing a rural service sector became

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[2] According to China's leading analyst of rural development, Du Rensheng, at least 200 million rural inhabitants would have to find work in the rural nonagricultural sector. Du Rensheng, "Second-stage Rural Structural Reform," *Beijing Review*, No. 25 (24 June 1985): 15–17, 22.

vital national policy to stem the tide of rural-to-urban migration. According to *Peasant Daily* of 24 February 1988, by 1987 the output value of rural enterprises, including industry and the service sector, surpassed the total output value of agricultural production. The rapid increase in rural living standards following decollectivization created a huge market for home appliances and construction materials, as peasants demanded amenities previously reserved for urban residents. Rural industry now produces many light industrial goods for everyday living, such as electric fans, cooking utensils, and clothing, undermining the state sector's monopoly on light industrial production. As these consumer goods were removed from the state plan, rural industry, with its more flexible production lines, responded rapidly to increased nationwide demand. By 1988, rural industry, excluding services, accounted for over 26 percent of total nationwide industrial production.

As the quality of these light industrial products improved, rural industry in the coastal regions moved swiftly into the export sector; in 1989, rural industry directly earned almost 20 percent of China's foreign exchange. Local governments have also used flaws in the banking system to siphon enormous amounts of scarce funding from central coffers for developing local industry, which has become the local governments' "cash cow." Although the central government has tried on numerous occasions to limit the growth of the rural industrial sector, local resilience has always succeeded in weathering the storms, progressing rapidly once the environment improved. Today, rural industry remains a major challenger to the state sector in light industry and export earnings and has shifted from a supplementary economic role to what Bo Yibo now refers to as "a major pillar of the national economy." [3] This change calls for more attention to be paid to this booming and critical sector of China's political economy.

II. HISTORICAL DEVELOPMENT

Even before rural industry rose to such prominence in China's economic development, its history shows a remarkable resiliency and a penchant for irrepressible autonomous development. Today, as leaders who favor more planned development with greater emphasis on the state sector try to inhibit rural industry, they confront a sector that has weathered numerous assaults from the central government, emerging from each confrontation better equipped for continued economic growth.

During the Great Leap Forward (1958–60), peasants were mobilized to produce steel in backyard furnaces and to set up small workshops as part of the People's Communes. Soviet-built plants, coming on line in 1957–59, did not improve life in the countryside, so the state promoted rural industry to address the rural-urban gap. But central plans for guiding and promoting small-scale rural industries, drawn up in 1957–58, were ignored as local initiatives to set up factories took over. At least 7.5 million new factories and workshops, with the majority processing agricultural produce, were set up in the first nine months of 1958.[4] But the economic catastrophe of 1960–62 dried up material resources, so state policy which called for the closing of all loss incurring industries also stipulated that 90 percent of China's rural labor force remain in agriculture. In response, local officials shut down many rural factories.

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[3] See Bo Yibo, "To Develop Township and Town Enterprises is a Task of Strategic Significance," Speech to the Delegates to the Inauguration of the Chinese Township and Town Enterprise Association, 11 January 1990, in *FBIS*, No. 9–S (9 February 1990): 41–43.

From the mid-1960s through the early 1970s, rural industry grew for two reasons. Responding to the US escalation of the Vietnam War in fall 1964, China moved one-third of its industrial base to the hinterlands, creating a "Third Front." [5] With almost one-third of its national budget going to establish this new industrial heartland, rural areas were left to develop on their own. Second, China's burgeoning "green revolution" called for increased production of chemical fertilizer and cement for both water conservation projects and power plants for pumping water. When the 1970 Northern Districts Agricultural Conference promoted agricultural mechanization,[6] and the "five basic industries—cement, agricultural machinery, power generation, fertilizer, steel—local enthusiasm led to excessive factory construction, which the Chinese called "blind development." [7] The August 1971 National Conference on Rural Mechanization, which decided that rural industry should promote agricultural mechanization, made rural industries eligible for bank loans and fiscal support.[8]

These policies led to rapid growth in county-owned rural industry. Between 1965 and 1969 the production capacity of small, nitrogenous fertilizer plants grew five times, and their share of national fertilizer output increased from 12 percent in 1965 to 60 percent in 1971. The number of cement plants increased tenfold between 1965 and 1973, and came to produce almost half of China's cement. Similar growth occurred in pig iron production, small-scale power generators and farm equipment.[9]

After 1972, commune and brigade enterprises grew rapidly. Urban youths sent to the rural areas in the Cultural Revolution persuaded urban factories to set up workshops in their villages as a way of getting themselves out of fieldwork and into factories. A 1974 policy, implemented in parts of rural Jiangsu Province, called on all communes to promote brigade-level factories, while another policy carried out in suburban Nanjing allowed local officials to demand that state enterprises, which took village land, build workshops in these villages and employ displaced rural laborers.[10] Finally, the 1976 founding of the National Rural Industry Administration formally legalized the position of rural firms.[11]

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[4] Carl Riskin, *China's Political Economy: The Quest for Development Since 1949* (Oxford: Oxford University Press, 1987): 125–126.

[5] Barry Naughton, "The Third Front: Defense Industrialization in the Chinese Interior," *The China Quarterly*, No. 115 (September 1988): 351–386.

[6] *Zhonghua renmin gongheguo jingji dashiji, 1949–1980* (Major Events in the PRC, 1949–1980; Beijing: Zhongguo shehui kexue chubanshe, 1984), p. 463.

[7] *Major Events in the PRC, 1949–1980*, op.cit, p. 472.

[8] Luo Xiaopeng, "Ownership and Status Stratification," in William Byrd and Lin Qinsong, eds., *China's Rural Industry: Structure, Development and Reform* (New York: Oxford University Press, 1990).

[9] Riskin, *China's Political Economy*, op.cit., pp. 214–15.

[10] Information collected by the author during his various research trips to rural Jiangsu Province.

[11] Luo, "Ownership and Status Stratification," op. cit.

In the late 1970s and early 1980s, decollectivization, which shifted resources from collectives into private hands, decreased funding for rural industry. Twenty thousand commune and 85,000 brigade enterprises closed in 1981, with the loss of 500,000 jobs.[12] However, local capital accumulation in the 1970s through "extra budgetary funds;" a 1979 financial reform allowing local government to retain and invest larger shares of its revenues; [13] a doubling of Agricultural Bank of China (ABC) loans to rural industries in 1979–80; and three-year tax-free development for new enterprises in the late 1970s and early 1980s all gave local governments the funds and incentives to promote rural industry. Reforms in agricultural procurement created new opportunities for food processing plants, while the legitimization of private enterprises in the mid-1980s boosted rural industry.[14]

Since the 1984 issuance of State Council Document No. 4, which renamed "commune and brigade enterprises" as "township and village enterprises," rural industry has become a major factor in all aspects of the national economy. Loans to rural industry in 1984 were 2.3 times those of 1983.[15] Local data collected by the author in counties around Nanjing reflect major industrial expansion in 1984–85. In one township, output increased from 4.6 million yuan in 1983 to 7.3 million in 1984, and 9.97 million in 1985. In Jiangpu County, outside Nanjing, from 1983 to 1984 industrial output increased 24 percent; by 1985 it was up another 26 percent. Weakened central government control over allocation of producer goods, along with increased local control over investment funds, fueled further growth, particularly in areas with strong industrial bases. In Jiangsu and Zhejiang provinces, rural industrial growth far surpassed overall industrial growth, as much of the industrial expansion in these provinces was due to growth in rural industry.[16]

A new period of growth followed then General Secretary Zhao Ziyang's November 1987 call for China's coastal areas to implement an export-led growth strategy.[17] Dissatisfied with the results of his 1984 urban industrial reforms, Zhao argued that rural enterprises, not state-run ones, would be the "new impact force" for establishing an export-oriented economy and for earning foreign exchange.[18] Since then the role of rural industry in China's foreign trade has expanded rapidly (Table 1). In spite of the current retrenchment, 1990 estimates from officials in the Ministry of Agriculture are that rural industrial exports will climb by another 25 percent to over US$12.5 billion.[19]

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[12] Christine P.W. Wong, "Interpreting Rural Industrial Growth in the Post-Mao Period," *Modern China*, Vol. 14, No. 1 (January 1988): 8–9.

[13] Wang Bingqian, "Report on Financial Work," *Beijing Review*, 29 September 1980.

[14] Wong "Interpreting Rural Industrial Growth," op. cit., pp. 7–9.

[15] *Zhongguo jingji nianjian, 1985* (Chinese Economic Yearbook), p. v–228.

[16] Robert Delfs, "The Rural Uprising," *Far Eastern Economic Review*, 11 July 1985. According to Delfs, between 1978 and 1984, annual growth in rural enterprises of nearly 25 percent in Jiangsu Province increased the privince's industrial output vaue by 19 percent/year.

[17] David Zweig, "Internationalizing Rural China: The Domestic Politics of Rural Exports," *Proceedings of the 19th Annual Sino-American Conference on Mainland China* (Taipei, forthcoming).

[18] "Zhao on Coastal Area's Development Strategy," *Beijing Review*, 8–14 February 1988, pp. 18–23.

[19] Interviews by author in Nanjing and Beijing, summer 1990.

The latest retrenchment began in fall 1988, following the October 1988 Third Plenum's decision to deflate China's overheated economy. With rural industry a major target of that effort, the number of enterprises, and the total number of employees in rural enterprises, decreased for the first time since 1981. However, after June 4, 1989, the newly dominant planning faction, whose base of support lies in the state-owned, heavy industrial sector, resurrected the centrality of state enterprises and squeezed rural industry mercilessly by closing off most forms of credit. The "39 Points," put forward at the 5th Plenum in November 1989, called on all rural enterprises that waste energy, produce shoddy goods, pollute, or compete with state enterprises for materials, to close down, suspend production, merge with other firms, or shift product lines. Rural enterprises were to process only local materials "instead of scrambling with large enterprises for raw materials and energy." [20] As a result of these measures, almost two million firms closed or were taken over by other firms, and almost three million workers lost their jobs (Tables 2 and 4). According to estimates by the Ministry of Agriculture's Township and Village Enterprise Bureau, as of early 1990, only 30 percent of firms were making a profit; 50 percent lacked inputs or could not sell their products; 10 percent are ready to go bankrupt, while another 10 percent had gone bankrupt. An extremely hostile environment compelled many private entrepreneurs to close shop, while those who had contracted collective enterprises returned firms to the collective, causing the firms to stop production. Unofficial estimates suggest that the contraction in rural industry has forced 15 million farmers back to the land.

By spring 1990, policy towards rural enterprises was forced to respond to popular anxiety and economic reality.[21] China's looming foreign debt crisis made it unwise to restrict a major foreign exchange generating sector. China's state budget faces an increasing deficit, and rural industries have supplied over 50 percent of new state taxes since 1980. With almost 100 million rural inhabitants employed in rural enterprises, nationwide plant closings and massive unemployment would lead to further rural-to-urban migration and both urban and rural unrest. Party leaders, including an important member of the old guard who reemerged during the events of spring 1989, lobbied on behalf of rural industry.[22] Further speeches, national conferences, exhibitions, and press reports supporting rural industry forced Li Peng to visit Jiangsu Province in February, where he admitted that "insufficient stress has been laid" on rural industry, and that its significance must be again recognized.[23]

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[20] See "Decision on Further Improving the Economic Environment, Straightening Out the Economic Order, and Deepening the Reforms (Excerpts), adopted at the Fifth Plenary Session of the 13th Central Committee of the Chinese Communist Party on November 9, 1989, in *Beijing Review*, Vol. 33, No. 7 (Feb. 12-19, 1990).

[21] The most important article was a commentary in *Peasant Daily* on 15 March, entitled "Correctly Appraise the Role of Township and Town Enterprises." See *FBIS-CHI*-90-078, 23 April 1990, pp. 51-53.

[22] In January 1990, Bo Yibo called on his old comrades to deepen their understanding of rural industrialization, reminding them that it was party policy (i.e., not just the reform faction's policy) and the creation of the peasants. Rural industrialization was the "inevitable trend in Chinese economic development," and a "strategic task" for invigorating the rural economy. See Bo, "To Develop Township and Town Enterprises," op. cit.

[23] Li's comments were quoted in *Peasant Daily*, "Correctly Appraise the Role of Township and Town Enterprises," op. cit.

Yet despite this crisis, rural industrial growth has persisted at a stable rate of 15–16 percent (as compared to earlier rates of 45 percent in provinces such as Jiangsu). Funding has come from rural credit cooperatives not controlled by the Agricultural Bank (Table 8), those linked to state firms or that earn foreign exchange, and from bank loans to nonpolluting rural industries that use local resources, as well as various local strategies including forcing workers to invest in factories, setting up local savings and loan companies outside the banking system, and local government surcharges.[24] Some local officials feel that this retrenchment has allowed them to close inefficient firms, preparing them again for a rapid development once funds become more accessible.

III. The Administrative Structure Supervising Rural Industry

When dealing with China's economy, precise definitions are often problematic. For example, the Chinese have applied the term—"township and village industry" (TVE) (*xiangcun qiye*)—to a wider category of firms than those simply run by these two levels of local government. Also, since the mid-1980s they increasingly referred to "township and town industry," (*xiangzhen qiye*), which includes former townships now incorporated as towns. In this paper, the definition of rural industry includes any factory, enterprise, firm, hotel or shop situated in the rural areas or rural towns and owned cooperatively, privately or by local governments (village, township or town), below the county level (Table 9).

Unlike most industrial sectors in China, which are defined by product types, rural industry is defined by the level of ownership—township, village, cooperative or private—and its geographic location—in the rural areas. At the top of the bureaucratic structure guiding rural industries is the Township Enterprise Administrative Bureau (*xiangzhen qiye ju*), established in 1979 under the Ministry of Agriculture (MOA). According to the recently published *A List of Chinese Government Organizations*, the Bureau's major tasks include researching and directing rural industry's planned development, management, laws, economic structure, technological development, and liason with other ministries to improve the quality of rural industrial products.[25]

Other ministries and commissions have their own offices for rural industry. According to one official in the MOA, every ministry has a particular interest in TVEs (which may suggest that several of them have specific offices for dealing with TVEs), and the MOA's responsibility is to work out all the relationships among the different ministries.[26] For example, the State Planning Commission has a Division of Township Enterprises (*xiangzhen qiye chu*), whose task is to organize the work of different units to support rural industry. Given the fact that rural industrial production crosses so many product lines and therefore challenges the products of so many ministries, most ministries need to coordinate with rural industries in some manner.

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[24] Jean Oi, lecture at Fairbank Center, Harvard University, 10 August 1990.

[25] The *Name List of Chinese Government Organizations, Vol. 1, 1989* (Zhongguo zhengfu jigou minglu; Beijing: Xinhua chubanshe, 1989), pp. 191–92.

[26] One would assume that the TVE Bureau in the MOA calls together all the different offices relating to TVEs in the central bureaucracy to coordinate work. On the issue of exports from rural areas, national conferences are always run by both the MOA and the Ministry of Foreign Economic Relations and Trade.

At the provincial level, the Township Enterprise Department (*xiangzhen qiye ju*) is separate from and reportedly has equal bureaucratic status to the provincial Department of Agriculture (*nongye ting*). Within this department are several bureaux, one of which is now an office for promoting external economic relations. The provincial Planning Commission also has an office for coordinating the relationships among the different industrial bureaucracies related to rural enterprises. Similar structures exist at the municipal level, with the MOA replaced by a Rural Work Department within the city government. The city's Industrial and Commercial Bureau (*gongshang guanli ju*), and its Individual Household Department (*getihu chu*) are responsible for collective and private commercial endeavors in the suburban counties. While the scale of bureaucratic supervision is vast, these overlapping bureaucracies mean that direct control often lies with the level of government which owns or directly supervises the enterprise.

Thus real control over rural enterprises lies at the county level and below; in suburban areas, the city's district government (*qu*) plays this same role. Here the most important organization for fostering the expansion of rural enterprises is the County (or District) Planning Commission which is responsible for determining economic priorities and apportioning local funds. It allocates foreign exchange to different factories in the county and townships. Other important organizations responsible for rural enterprises include the Bureau of Township and Village Enterprises (*xiangzhen qiye ju*), which helps foster township, town and village enterprises, and the county Industrial and Commercial Bureau (ICB), which is responsible for licensing, training, and overseeing all commercial enterprises in the county. The ICB's Individual Household Department (*getihu ke*) supervises all private industrial and commercial activities within the county.

While these bureaucracies monitor or promote development, many county-level organizations own rural factories directly. While these enterprises would not be included in the statistics on rural industry, because they are owned by administrative units at the county level, they form part of the ever-increasing landscape of rural industrialization. For example, county Supply and Marketing Cooperatives, which until the mid-1980s had a monopoly on the purchase and sale of most agricultural inputs and production, control a large number of rural enterprises. In Wujiang County of Suzhou Municipality, the Supply and Marketing Coop owns 42 factories and employs over 8,000 workers. According to its vice-director, there are about five cooperatives like this in China. In Zuoping Country, Shandong Province, Walder found that of 26 collective enterprises under county control, 11 were owned by the Supply and Marketing Coop, six were run by the Light Industrial Collective, three by the Construction Commission, two by the Grain Bureau, two by the Bureau of Public Affairs and one each by the Commerce

Bureau and the Agriculture Bureau.[27] At the township level, the most direct control belongs to the Industrial Company (*gongye gongsi*).[28] Before these companies were established in the mid-1980s, all rural enterprises were controlled by the Commune Party Committee and the Commune Management Committee. In the 1983 reform of the commune structure, the commune administration was split into a township government, a township party committee and an Economic Association Committee (*jingji lianhe weiyuanhui*) responsible for supervising all economic activities.[29] Underneath it were four offices responsible for agriculture, industry, sidelines, and an office for economic management. When this Economic Association Committee was disbanded in February 1986, the industrial, sideline, and agricultural companies remained under the supervision of an Office of Economic Management (*jingying guanli bangongshi*). According to interviews in 1986, however, the industrial company was actually under the direct supervision of the district planning commission, and the Office of Economic Management was under the district party committee's Agricultural Work Department.[30] While the sideline company ran a tree farm and a small cattle business, all commercial and sideline endeavors owned by the township where really under the management of the industrial company, and would be considered part of rural industry. Interviews with the township party secretary showed, however, that he retained great influence over economic decisionmaking.

Finally the administrative villages (*cun*) work within the same broad framework, with the village management committee supervising all industrial enterprises owned by the village, and the village party committee often interfering in local economic management. However, in regions where the administrative villages are highly industrialized, townships may wield little control.

IV. ESTABLISHING THE RURAL-URBAN LINKAGE

Since 1984, a major reason for rural industrial growth has been the increasing connection between urban and rural factories. After the State Council raised the status of rural enterprises, city governments and rural officials were called upon to establish economic linkages between these two industrial sectors. In some provinces, the new policy of "cities leading the counties" (*shi lingdao xian*) increased the authority of urban administrators over the rural areas. In 1986, all factories in Nanjing with outputs of over 3 million yuan had to help rural industry. One official in the Wuhan city planning commission was given the task of establishing economic linkages with rural factories, sending retired workers and technicians to them and opening training courses for their new managers. Much of southern Jiangsu Province's rural industrial boom was due to the migration of many technicians from Shanghai factories into rural areas around Wuxi, Suzhou and Changzhou municipalities.[31]

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[27] Andrew G. Walder, "A Profile of Zouping County Industry and Finance," Shandong Field Research Project, 1988 Field Report, presented at the conference at Wingspread Center, Racine, Wisconsin, Nov. 4–6, 1988.

[28] In some locations, such as Nanhai County, Guangdong Province, the industrial company at the township level is called the Township Industrial and Trading Company. Luo, "Ownership and Status Stratification," op. cit.

[29] This describes the process in Zijingshan Township, in the suburbs of Nanjing.

[30] At the county level, this would mean that township industrial companies are not under the direct leadership of the county TVE Bureau; rather they would also be under the county planning commission, which we always assume to be the most powerful economic organization in the county.

These linkages benefit urban factories. As the growth of the market economy undermines many urban factories' planned markets, linkage with rural factories enlarges the scope of their sales. Urban factories lack land for expansion; rural governments can expropriate land for new factories. Piece goods or certain parts of the product cycle can be efficiently subcontracted to lower-paid, rural industrial workers who do not receive state-mandated welfare benefits.

V. SECTORAL BREAKDOWN

Rural industries cover numerous economic sectors. While rural governments cherish these contacts because they allow people to enter the nonfarm sector without migrating to the cities, they also make localities more vulnerable to fluctuations in the planned economy. "The five basic industries" promoted in the 1960s and 1970s, and aimed at making the rural areas self-reliant, linked rural industry with the urban enterprises in the chemical, cement, agricultural machinery, iron and steel, and energy sectors. Since the 1970s, the sectoral breakdown of rural enterprises has changed significantly. While we do not possess detailed comparative data for pre-1980 on output by products, Tables 2 through 7 show the breakdown by broad sectors. In both total output and employment (Tables 5 and 7), agriculturally oriented firms declined, as did industrial firms, with the major exodus from agricultural labor moving into transportation, construction, and commerce (including small restaurants and food stands).[32] According to *People's Daily*, in 1980–81, rural industries shifted from low-profit enterprises, such as those making small farm tools, to high-profit ones producing consumer goods.[33] Table 10 presents sectoral breakdowns for 1980, 1985, and 1988. Significant changes since 1980 have occurred in textile production, paper making, mining and chemical production. While construction boomed between 1978 and 1980, it has developed significantly in terms of total output, and its role in rural industry has steadily declined.

When these different rural factories are linked with state-owned factories, they fall into different bureaucratic systems *(xitong)*. Textile factories fall under the light industry system; chemical plants fall under the chemical industry system. But overall, linkages between central ministries and rural enterprises are quite weak. While the State Planning Commission might include output from TVEs in its projected growth data, it does not include transfers of output or inputs to rural industry even in the guidance aspects of the plan. These firms have access to planned goods only if the larger firms with which they deal allocate planned commodities to them.

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[31] For an analysis of urban-rural relations in the 1980s, see David Zweig, "From Village to City: Reforming Urban-Rural Relations in China," *International Regional Science Review*, Vol. 11, No. 1, pp. 43–58.

[32] By 1986, many urban construction projects were contracted to rural governments who sent labor teams all over the country. For example, in 1986, Qidong County, in Jiangsu, was carrying out projects as far away as Guizhou Province.

[33] *People's Daily*, 1 April 1981.

VI. State Controls

While the central government has few direct controls over rural industry, Beijing has carried out frequent retrenchments of rural industries. In the 1960s, the state closed 20,000 commune enterprises and laid off 500,000 workers. In October 1985, *People's Daily* called for another such retrenchment, and in 1988–89, especially after the June 4 crackdown, the state forced over one million inefficient enterprises to close.

The major source of central control is the supply of loans to rural industry. While wealthy counties may have sufficient capital to generate industrial growth, most counties and townships need loans. Through its control of the Agricultural Bank, the Ministry of Finance and the People's Bank of China control the flow of funds to rural industry. Constraints imposed on new capital construction can cut the flow of funds to new factories. The central administration can stop rural factories from withdrawing their own funds from the bank [34] or force them into bankruptcy by simply insisting that banks call in all outstanding loans.

The effort to promote more technologically advanced products from rural enterprises also increases central government influence. In 1985, to improve the quality of rural enterprises and agricultural production, the State Council approved the "Sparks Plan," put forward by the State Science and Technology Commission. Under this plan the SSTC is able to allocate funds, scientific information, management skills, new crops, and technological innovations to rural industry, and to promote linkages between scientific research institutes and rural industry. Rural firms that became part of the "spark" program could receive more loans, but at the cost of being included in the state plan.[35]

The new emphasis on promoting exports from rural areas has increased central governmental control over TVEs. The Ministry of Foreign Economic Relations and Trade (MOFERT) now assigns export quotas and foreign exchange quotas to counties which divide them among county-run firms and township governments, which further divide them among township-run firms. Negotiations over these quotas allow for only minor adjustments at the margin.[36] More recently, 190 township enterprises whose products will be promoted overseas will be brought more directly under state control by becoming part of the export-oriented manufacturing system.[37]

Finally, in the recently published "Regulations Governing Rural Collective-Owned Enterprises," the current leadership declares township, town, and village-owned enterprises—as distinct from cooperatively and privately owned firms—as component parts of China's socialist "public ownership economy." [38] Throughout, the document stresses the state's role in encouraging, promoting rural enterprises while still guiding them. Firms are warned that they must produce goods that accord with the state's industrial policy; those that continue to produce low quality products will be shut down.

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[34] *China Daily–Business Weekly,* 1 May 1989, p. 3.

[35] *China Daily–Business Weekly,* 16 January 1989, p. 4.

[36] Interview in Beijing in April 1989.

[37] *China Daily–Business Weekly,* 14 May 1990, p. 1.

[38] *FBIS,* 15 June 1990, pp. 31–35.

VII. LOCAL GOVERNMENT CONTROLS

Although rural enterprises are either leased to individuals by contract with the local government or privately owned, they remain tightly controlled by different local officials. While collectively owned rural enterprises are nominally independent of local political controls, work by Western scholars such as Oi and Walder, and Chinese scholars such as Wang, Zhao, and Luo show that county, township and village governments wield significant power and in many cases completely determine the decisions of factory managers. Even private firms have shown a propensity to become closely entwined with local governments in many parts of China, although in some cases local entrepreneurs may wield important political influence. Thus the formal management structure may obscure the locus of real decision-making authority.

The most important reason for government interference is that rural industry has become the local government's main source of revenue. Under the "financial responsibility system" introduced in the mid-1980s, whereby each level of government contracts with its immediate superior to turn over a fixed sum of funds—with the surplus remaining with the local government—a predatory system of tax farming has been established. As a result, local governments use every method possible, including many which straddle the boundaries of legality, to promote rural industry, at the same time milking it to supplement their government budgets.

In some prosperous locations, townships and villages have sufficient funds to generate their own rural enterprises. Red Flag Township, near Wuxi, invested 12 million yuan in 1978–84, of which 80 percent came from retained profits from other enterprises in the county.[39] According to one press report, there are 13 different ways for local governments to raise funds for rural enterprises.[40]

Local banks and local governments have close relations. While the state calls for cutbacks on capital investment, the county and township governments get new funds through the efforts of local branches of the ABC, in particular the Rural Credit Cooperatives. The credit coops rely primarily on peasant deposits for their investment funds; as a result the central government cannot prevent them from loaning deposits to rural industries, particularly when local governments apply strong pressure. As mentioned above, rural credit coops expanded the scale of their loans even during the peak period of the government's recent prohibition against loans to rural industry.

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[39] Delfs, "The Rural Uprising," op. cit., p. 94.

[40] These include: selling stock or dividends; making new workers contribute funds as they join factories; cooperating with state, other collective, or specialized households; private credit loans; cooperating with educational or research institutes; loans from other enterprises; cut backs on other new projects; efficiently using capital, etc. See *Peasant Daily*, 16 August 1985, p. 2.

Because township industries pay a high rate of tax to the county, county governments have become their active protectors. According to Luo, since TVEs are "the political and economic foundation for Wuxi County as a whole," local banks have consistently come to their rescue.[41] When funds were short in Wuxi in 1986, banks borrowed 100 million yuan from other areas which they loaned to rural industries at cost. They also reduced interest rates for loans to the lowest legal level, even though lending rates are subject to central government regulations. Walder's findings show that rather than compel the banks to make loans, the county assumes the financial risks that the banks would face by promising that they will give enterprises continued tax breaks until the enterprises repay the loans. In this way, expanding rural industry in the short-run costs the county, and probably township governments, short-term tax revenues.[42]

County and township governments aggressively defend their own economic interests, particularly from challenges by private firms. In 1985, when burgeoning private firms and village enterprises drew labor and business away from county- and township-owned firms, Wuxi County's government imposed restrictions on these firms. It thoroughly investigated village-owned firms, and if they were defacto private and only nominally collective, they were closed down. Relatives of skilled workers who left collective enterprises to work for private ones were permanently barred from jobs in TVEs. By these methods, the county drove out the competition, allowing private enterprises to survive only in commerce, transport and services.[43] Since June 4, 1989 and the reemergence of a political climate critical of excessive private profits, taxes on private enterprises, as well as new restrictions on how they use their profits, have increased.[44] Also, if managers who leased collective enterprises earn salaries that are several times higher than those of their workers, the local government can force them to reinvest more in the collective.[45] When local enterprises, including factories, orchards, and other collective enterprises, were first leased in the early and mid-1980s, local officials grossly underestimated the size of profits that leases could earn. As profits soared, peasants and cadres often demanded renegotiation, triggering a rash of contract disputes. As a result, China has found it necessary to uphold the legality of rural contracts.[46]

To maximize political and economic security, private firms take on various ties to collective firms or local governments. Researchers in Jieshou County, Anhui Province, found one case in which an individual peasant opened a firm that was nominally called a township enterprise, but which was under the direct control of the county. This peasant got easy loans, tax exemptions, a bank account, and the opportunity to purchase land in the county seat.[47] In the reverse situation, another case featured four individuals who opened a food processing plant that nominally belonged to the district, yet the district never interfered in their business decisions. In Nanhai County, Guangdong Province, local governments established joint private-collective ownership, where successful private firms or factories were financially reinforced by local governments who needed their products. A contractural division of profits was worked out. Similarly, in Wenzhou District, Zhejiang Province, because private businessmen cannot do business with the socialist sector, they establish formal affiliations with collective or state enterprises, to which they pay a fee for the privilege. Local cadres help businessmen form such collective or "partnership firms" to protect them; in return they get voluntary donations and assistance for local government projects.[48]

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[41] Luo, "Ownership and Status Stratification," op. cit.

[42] This fact explains why some wealthy counties with expanding industrial bases pay peasants with IOUs for the grain it procures; all government and bank-funds are tied up in promoting rural industry.

[43] Luo, "Ownership and Status Stratification," op. cit.

[44] Adi Ignatius, "Beijing Reins in Wenzhou Experiment," *Asian Wall Street Journal*, 13 February 1990.

[45] Jean C. Oi, "The Fate of the Collective After the Commune," in Ezra Vogel and Deborah Davis, eds., *Social Consequences of Chinese Economic Reforms* (Cambridge, MA: Harvard Contemporary China Series, forthcoming).

[46] David Zweig, Kathleen Hartford, James Feinerman and Deng Jianxu, "Law, Contracts and Economic Development: The Case of Rural China Under the Reforms," *Stanford Journal of International Law* (Summer 1987).

Unclear rural property rights allow governments to expropriate firms owned by other levels.[49] In Jiangpu County, Jiangsu Province, the author discovered that a successful export-oriented factory owned by the county-seat government was taken over by the higher-level county government in 1986, while in Jieshou County, Anhui Province, researcher Luo Xiaoping found that some private firms were also taken over by the county. Factory workers hoped that by turning these private firms into county-owned collectives they would be eligible for benefits similar to those received by state workers. The private owners could also become state cadres and their families could get access to urban household permits.

VIII. CONCLUSION: PROBLEMS AND PROSPECTS FOR RURAL INDUSTRY IN THE 1990S

Because rural industries have grown at a rather remarkable rate, they constantly generate and confront new problems. Many of these problems will continue to affect state and local policy towards rural industry.

As rural industry becomes more capital intensive, it no longer serves as a major repository for excess labor. Yet by the year 2000, it must absorb at least another 50 million workers. Already estimates suggest that surplus rural labor runs anywhere from 70 to 156 million.[50] To avoid massive rural to urban migration, rural industries, including the service sector, must continue to expand if they are to play a major role in resolving future rural employment problems.

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[47] Report by Zhao Yang at the Fairbank Center-Development Institute Seminar, Nanjing, China, January 1989.

[48] Liu Ya-ling, "The Reforms from Below—the Private Economy and Local Politics in Rural Industrialization—the Case of Wenzhou in the Post-Mao China," Department of Sociology, The University of Chicago, July 1988.

[49] Unclear property rights, or what one scholar called "soft" property rights, are part of China's traditional heritage. Under the communists, such expropriations become commonplace during "leftist" or radical periods. See David Zweig, *Agrarian Radicalism in China, 1968-1981* (Cambridge, MA: Harvard University Press, 1989), pp. 145-168.

[50] Jeffrey R. Taylor, "Rural Employment Trends and the Legacy of Surplus Labour," *China Quarterly*, No. 116 (December 1988): 136-166.

As rural industries become more complex, they challenge state industries more directly. Their unquenchable need for resources has increased the price of raw materials. Resultant bidding wars prompt localities to keep resources in their own region, decrease profitability in the all-important state sector, and foster inflation. Yet if rural industries are prevented from seeking resources outside their localities, they will not be able to attain economies of scale or develop the necessary scientific and technical knowledge that will allow them to produce high quality products efficiently.

Rural industry exacerbates interregional inequalities.[51] With expanding ties to urban industries, suburban industries and those in developed areas near state firms should develop much faster. Coastal rural industry's increased access to foreign exchange offers workers, managers, and local governments benefits unavailable to inland rural areas. Data already shows clearly that some provinces earn greater amounts of foreign exchange and have higher retention rates than others.[52] Moreover, by selling foreign exchange at the higher market rate, coastal areas like Guangdong, Fujian, and Jiangsu provinces can pay a higher price for raw materials from the hinterland. These areas then process these goods for export, generating a cyclical process of "internal colonialism" whereby the inland areas supply raw materials to the coastal areas, who earn the "value added."

In advanced areas of the countryside, rural industry has moved beyond the stage of autonomous development. For various reasons—its role in exports, the need for technology, better management and quality control, rural industry became more embedded in the state bureaucracy, and with less autonomy—it may develop more slowly. On the other hand, because local governments used funds pried from local banks to keep many inefficient rural factories afloat, market mechanisms could not play the necessary role in rationalizing production. So long as these inefficient rural firms kept up their level of employment and paid their taxes to the local government, scarce capital continued to be wasted, even as the central government needed these funds for high priority projects in the energy and transportation sectors. Finding a proper balance among regional interests and between national and local interests, all the while ensuring steady development within the various regions and levels of the system, remains the major dilemma facing rural industry's future development.

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[51] For a more detailed analysis of this issue, see the chapter in this volume by David Denny, "Regional Economic Patterns During the Decade of Reform."

[52] See *Xiangzhen qiye nianjian, 1987* (Township and Villages Enterprises Yearbook, 1987; Beijing, Agricultural Publishing House, 1988), p. 616.

TABLE 1. Foreign Exchange Earnings From Township & Village Enterprises (TVEs)

(billions US dollars)

Year	Total Earnings	China's Total Export Earnings[6]	Percent of Total Export
1989	10.01	52.5	19.3
1988	[2] 8.02	47.66	16.8
1987	[3] 5.1	39.46	12.9
1986	[4] 4.5	31.37	14.3
1984–85	[5] 2.38	53.74	4.5

[1] *Foreign Broadcast Information Service*, 23 April 1990.
[2] *China Daily*, 25 September 1989, p. 1.
[3] Interview REBDHZ–4/89.
[4] *China Daily*, 15 December 1987, p. 1.
[5] Based on *FBIS*, 13 April 1990, which reported that 1984–1989 TVE exports totalled US$30 billion.
[6] IMF, *Direction of Trade Statistics Yearbook*, 1989.

TABLE 2. Number of Town Enterprises (TTEs) by Sector

(in 1000s)

Year	No. of Enterprises	Agriculture	Industry	Construction	Comm'n & Transport	Commerce & Catering Industry
1978	1,524.2	494.6	794.0	46.7	65.2	123.8
1979	1,480.4	743.9	767.1	49.7	82.1	137.6
1980	1,424.6	378.3	757.8	50.8	89.4	148.3
1981	1,337.5	319.0	725.4	48.3	88.9	155.9
1982	1,361.7	292.8	744.0	57.0	95.8	170.5
1983	1,346.4	269.8	744.0	57.0	91.6	184.0
1984	6,065.2	248.4	4,812.2	80.4	129.6	794.6
1985	12,224.5	224.2	4,930.3	82.6	106.1	6,881.3
1986	15,153.1	239.7	6,355.0	892.5	2,619.8	5,046.0
1987	17,446.4	231.2	7,082.5	901.3	3,237.8	5,993.6
1988	18,881.6	232.8	7,735.2	955.8	3,725.5	6,282.3
1989	18,686.0					

SOURCE: *Statistical Yearbook of China: 1989*, p. 245. 1989 figure from *A Statistical Survey of China*, 1990, p. 65.

TABLE 3. Number of TTEs by Sector

(percentage)

Year	No. of Enterprises	Agriculture	Industry	Construction	Comm'n & Transport	Commerce & Catering Industry
1978	100	32.5	52.1	3.0	4.3	8.1
1979	100	30.0	51.8	3.3	5.6	9.3
1980	100	26.6	53.2	3.6	6.3	10.4
1981	100	23.9	54.2	5.6	6.6	11.7
1982	100	21.5	55.0	4.0	7.0	12.5
1983	100	20.0	55.3	4.2	6.8	13.7
1984	100	4.1	79.3	1.3	2.4	13.1
1985	100	1.8	40.3	0.7	0.9	56.8
1986	100	1.6	41.9	5.9	17.3	33.3
1987	100	1.3	40.6	5.2	18.6	34.3
1988	100	1.2	41.0	5.1	19.7	33.0

SOURCE: *Statistical Yearbook of China: 1989*, p. 245.

TABLE 4. Total Employment in TTEs by Sector

(in 1000s)

Year	No. of Enterprises	Agriculture	Industry	Construction	Comm'n & Transport	Commerce & Catering Industry
1978	28,265.6	6,084.2	17,343.6	2,356.2	1,038.3	1,443.3
1979	29,093.4	5,330.0	18,143.8	2,984.5	1,169.0	1,466.1
1980	29,996.7	4,560.7	19,423.0	3,346.7	1,135.6	1,530.7
1981	29,695.6	3,799.4	19,808.0	3,488.3	1,073.8	1,526.1
1982	31,129.1	3,440.0	20,728.1	4,212.9	1,129.4	1,618.7
1983	32,346.4	3,092.2	21,681.4	4,827.2	1,097.1	1,648.5
1984	52,081.1	2,839.3	36,560.7	6,834.3	1,293.0	4,553.2
1985	69,790.3	2,523.8	41,367.0	7,899.5	1,141.8	16,858.2
1986	79,371.4	2,408.0	47,619.6	12,703.7	5,412.6	11,227.5
1987	87,764.0	2,441.1	52,653.7	13,740.0	6,153.5	12,875.7
1988	95,455.0	2,499.9	57,033.9	14,848.1	6,841.6	14,231.0
1989	93,662.0					

SOURCE: *Statistical Yearbook of China: 1989*, p. 246. 1989 data from *A Statistical Survey of China*, 1990, p. 65.

TABLE 5. Total Employment in TTEs by Sector

(percentage)

Year	No. of Enterprises	Agriculture	Industry	Construction	Comm'n & Transport	Commerce & Catering Industry
1978	100	21.5	81.4	8.3	3.7	5.1
1979	100	18.3	62.4	10.3	4.0	5.0
1980	100	15.2	64.8	11.1	3.8	5.1
1981	100	12.8	66.7	11.8	3.6	5.1
1982	100	11.1	66.6	13.5	3.5	5.2
1983	100	9.6	67.0	14.9	3.4	5.2
1984	100	5.5	70.2	13.1	2.5	8.7
1985	100	3.6	59.3	11.3	1.6	24.2
1986	100	3.0	60.0	16.0	6.8	14.2
1987	100	2.8	60.0	15.5	7.0	14.7
1988	100	2.6	59.7	15.6	7.2	14.9

SOURCE: *Statistical Yearbook of China: 1989*, p. 246.

TABLE 6. Total Output Value TTEs by Sector

(100 million *yuan*)

Year	No. of Enterprises	Agriculture	Industry	Construction	Comm'n & Transport	Commerce & Catering Industry
1978	493.07	36.19	385.26	34.80	18.77	18.05
1979	548.41	38.46	423.52	46.77	23.06	16.60
1980	656.90	39.38	509.41	60.05	24.52	23.44
1981	745.30	38.97	579.34	70.28	25.06	31.66
1982	853.08	40.06	646.02	100.38	29.27	37.35
1983	1,016.83	43.22	757.09	136.20	32.73	47.09
1984	1,709.89	52.91	1,245.35	216.54	42.31	147.78
1985	2,728.39	58.70	1,827.19	316.60	49.99	482.51
1986	3,540.87	68.87	2,413.40	522.73	255.93	279.44
1987	4,743.10	88.70	3,243.49	641.88	257.89	411.14
1988	64,956.6	115.27	4,529.38	827.70	473.46	694.95
1989	84,028.0					

SOURCE: *Statistical Yearbook of China: 1989*, p. 247. 1989 data from *A Statistical Survey of China*, 1990, p.65.

NOTE: The *Survey*'s data or total output value for other years differs somewhat from data in *Yearbook*, so except for 1989 *Yearbook data are used*. While final numbers may vary, the trends are similar.

TABLE 7. Total Output Value of TTEs by Sector

(percentage)

Year	No. of Enterprises	Agriculture	Industry	Construction	Comm'n & Transport	Commerce & Catering Industry
1978	100	7.3	78.1	7.1	3.8	3.7
1979	100	7.0	77.2	8.5	4.2	3.1
1980	100	6.0	77.6	9.1	3.7	3.6
1981	100	5.7	77.7	9.4	3.4	4.3
1982	100	4.7	75.5	11.8	3.4	4.4
1983	100	4.3	74.5	13.4	3.2	4.6
1984	100	3.1	72.8	12.7	2.8	8.6
1985	100	2.2	67.0	11.4	1.8	17.6
1986	100	1.9	68.2	14.8	7.2	7.9
1987	100	1.9	68.4	13.5	7.5	8.7
1988	100	1.8	69.7	12.7	7.3	10.7

SOURCE: *Statistical Yearbook of China: 1989*, p. 247.

TABLE 8. Rural Credit Cooperative Loans to TVEs, Dec. 1987–Sept. 1989

(billion *yuan*)

	Dec./87	June/88	Dec./88	June/89	Sept./89
RCC Loans to TVEs	32.9	46.3	45.6	51.2	53.7

SOURCE: People's Bank of China, cited in World Bank, *China: Country Economic Memorandum Between Plan and Market*, Report No. 8410–CHA, May 8, 1990, p. 16.

TABLE 9. Rural Industry By Level of Ownership, 1984, 1985, 1988.

	No. of Enterprises	No. of Employees	Output Value (billion *yuan*)
1984(a)			
COLLECTIVE			
Township	401,513	18,791,661	
	** (6.6)	(36.1)	143.3
Village	1,248,128	19,689,332	(86)
	(20.6)	(37.8)	
PRIVATE			
Cooperative *	1,119,583	6,559,453	15.9
	(18.4)	(12.6)	(9)
Private	13,295,900	7,020,462	11.7
	(54.3)	(13.5)	(7)
TOTAL	16,065,124	52,060,908	170.9
1985(b)			
COLLECTIVE			
Township	419,476	21,113,565	
	(3.44)	(30.3)	198.78
Village	1,149,595	20,407,813	(72.9)
	(9.4)	(29.2)	
PRIVATE			
Cooperative	1,402,012	9,463,290	74.06
	(11.5)	(13.5)	(27.1)
Private	9,253,509	18,805,660	
	(75.6)	(27)	
TOTAL	12,224,592	69,790,328	272.84
1988(c)			
COLLECTIVE			
Township	420,000	24,900,000	243.9
	(2.2)	(26.1)	(37.5)
Village	1,170,000	24,040,000	192.4
	(6.2)	(25.2)	(29.6)
PRIVATE			
Cooperative	1,200,000	9,770,000	56.1
	(6.4)	(10.2)	(8.6)
Private	16,090,000	36,750,000	157.2
	(85.2)	(38.5)	(24.1)
TOTAL	18,880,000	95,450,000	649.6

SOURCE: (a) Wong, "Interpreting Rural Industrial Growth," op. cit. p. 13; (b) *Zhongguo nongye nianjian, 1986* (China's Agricultural Yearbook; Beijing: Nongye Chubanshe, 1986), pp. 158, 160; (c) Ministry of Agriculture, P.R.C., *A Survey of China Township Enterprises* (August, 1989).

* While the data for 1984 and 1985 divides cooperatives into "peasant joint cooperatives" and "other types of cooperatives," I put them together for simplicity. The ratio between these two types of cooperatives in terms of number of firms, employees or total output value, based on 1984 and 1985 was approximately 4:1 or 5:1 favoring peasant joint cooperatives.

** Numbers in parenthesis give a percentage distribution of the totals.

TABLE 10. Industrial Output Value in Township and Village Industries, 1980–88

(in 100 million RMB/percent of total production)

	1980 Output/Percent		1985 Output/Percent		1988 Output/Percent	
Mining/Metallurgy	10	2.0	49	3.3	150	4.3
Electric power	2	0.4	5	0.3	8	0.2
Coal	21	4.1	56	3.8	75	2.2
Petroleum	1	0.2	2	0.1	7	0.2
Chemical, Plastic	42	8.3	122	8.4	361	10.5
Machinery	132	25.9	372	25.5	847	24.6
Building	104	20.4	275	18.8	546	15.9
Forestry	15	2.9	43	2.9	89	2.5
Food	41	8.1	114	7.8	271	7.9
Textile	34	6.7	182	12.5	476	13.8
Sewing	19	3.7	53	3.6	130	3.8
Leather	8	1.6	23	1.6	59	1.7
Papermaking/Stationery	20	3.9	78	5.3	221	6.4
Other	55	10.8	79	5.4	199	5.8
Total	509	99.08	1459	99.21	3438	99.8

SOURCE: 1980 and 1985 data came from *A Survey of China Township Enterprises*, (Ministry of Agriculture, PRC, June, 1988). 1988 data came from *A Survey of Township Enterprises in China*, (Ministry of Agriculture, Township Enterprise Bureau, August 1989).

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